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When dealing with atmospheric pollution, it is necessary to amass, catalog, sort, evaluate and perform calculations upon large volumes of data. The Emissions Inventory System/Point Source (EIS/PS) provides air pollution control agencies with the capability to create and maintain their own data bases of point source data and to retrieve data and generate reports from those data bases. This report contains step by step procedures for the operation of each program in the system. Each program has sections containing a description, file formats, options, error messages, catalogues JCL (IBM), warnings and special instructions, cost considerations, and related programs and procedures. The report is structured along system functional lines; i.e., file creation and maintenance, data accessing and manipulation, and reports. There is also a section dealing with inter-functional procedures and one which deals with JCL and general topics. The EIS/PS is compatible with NEDS and will automatically handle EPA reporting requirements.

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Computer Sofware	EIS/AS	
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1.0 INTRODUCTION

1.1 ORGANIZATION

The major functions of the Emissions Inventory System/Point Source Subsystem (EIS/PS) are creating and maintaining a valid data base, accessing and manipulating that data base, and producing reports. This User's Guide is structured to reflect these functions; i.e., the programs and procedures in EIS/PS are documented within these three groupings. The discussions of the EIS/PS functions and programs comprise Section 4.0 FILE CREATION AND MAINTENANCE, Section 5.0 DATA ACCESSING AND MANIPULATION, and Section 6.0 REPORTS.

Each of these sections contains an introduction which explains the particular function and operating instructions for each of the programs which comprise that function. Flow charts illustrating the operation of the programs are included in each introduction. The program operating instructions consist of a description of the program, the formats of the files accessed by the program, a discussion of program options, and a list of error messages produced by the program. A discussion of the Job Control Language (JCL) for executing the program, warnings and special instructions, cost estimates, and related programs and procedures are also included.

The programs discussed in Sections 5.0 and 6.0 are grouped into categories according to the specific aspect of the major function which they perform. The categories addressed in Section 5.0 DATA ACCESSING AND MANIPULATION are retrieval, sort generation, and internal transaction file concatenation. The categories comprising Section 6.0 REPORTS are EPA-required reports, file listings, summary reports, and the quick look report.

In addition to these program sections, this User's Guide includes sections which provide information necessary for full utilization of EIS/PS. Section 2.0 OVERVIEW OF EIS/PS provides a brief discussion of the subsystem, explains the program design, and provides a system flowchart. Section 3.0 ECONOMICS discusses the cost of installing and operating EIS/PS as well as ways to reduce these costs. Section 7.0 INTER-FUNCTIONAL PROCEDURES describes sample run streams which execute programs from more than one functional area, such as producing a report from a retrieved answer file. Section 8.0 JCL AND GENERAL TOPICS discusses the IBM JCL used in the EIS/PS cataloged procedures and explains the installation and updating processes. Additional information concerning the operation of EIS/PS is included in the four appendices.

Seven-letter names are used for all programs in EIS/PS. The first position contains a 'P' for EIS/PS, positions 2 and 3 contain a function indicator (see Figure 1.1-a), and positions 4 thru 7 contain information relating to the file used or type of report. Each program is also assigned a program number prefixed by 'EP'. See Figure 1.1-b for a list of program names, numbers, and descriptions.

The cataloged procedures all have seven-character names. The first two characters are 'EP', positions 3 and 4 contain the function indicators (See Figure 1.1-a), position 5 provides information on the file used (See Figure 1.1-c), and the last two characters are numeric. See Figure 1.1-d for a list of procedures.

Code	Description
CV	Conversion
CE	Conversion and Edit
ED	Edit
EM	Edit-Maintenance
FM	File Maintenance
MS	Miscellaneous
RP	Report
RT	Retrieval
SR	Sort
ST	Statistical

Figure 1.1-a. Function Indicators

Program Name	Program Number	Description	Reference	Page Number
PCENETR	EP0060	NEDS to EIS/PS Master File Transaction Conversion-Edit Program	4.3.3	141
PCVNEEF	EP0020	NEDS to EIS/PS Emission Factor File Transaction Conversion Program	4.2.3	57
PEDMSTR	EP0080	Master File Transaction Edit Program	4.3.5	192
PEMEFAC	EP0040	Emission Factor File Edit-Maintenance Program	4.2.5	83
PFMMSTR	EP0120	Master File Maintenance Program	4.3.9	291
PMSEFIN	EP0100	Master File Internal Transaction Emission Factor Insertion Program	4.3.7	268
PMSEFGN	EP0130	Master File Emission Factor Transaction Generator Program	4.3.10	326
PMSTCON	EP0190	Internal Transaction File Concatenation Program	5.4.2	479
PRPDUMP	EP0220	Master File Formatted Dump Program	6.3.3	544
PRPEFAC	EP0230	Emission Factor File Detailed Report Program	6.3.4	552
PRPENTR	EP0200	Annual Report Program	6.2.2	507
PRPEPRJ	EP0250	Master File Emissions Projection Program	6.4.2	562
PRPMSTR	EP0210	Master File Detailed Report Program	6.3.2	535

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Figure 1.1-b. EIS/PS Programs

Program Name	Program Number	Description	Reference	Page Number
PRPQUIK	EP0280	Quick Look Report Program	6.5.4	671
PRPQTRN	EP0290	Quick Look Turnaround Document Program	6.5.5	684
PRTGENR	EP0150	Generated Retrieval Program	5.2.3	437
PRTLNGP	EP0140	Retrieval Language Processor Program	5.2.2	397
PRTQLED	EP0260	Quick Look Edit Program	6.5.2	592
PRTQLEX	EP0270	Quick Look Extract Program	6.5.3	659
PSREFTR	EP0030	Emission Factor File Transaction Sort Program	4.2.4	78
PSREFIN	EP0090	Master File Internal Transaction Pre-Insertion Sort Program	4.3.6	263
PSRGENR	EP0170	Generated Sort Program	5.3.3	468
PSRINTR	EP0110	Master File Internal Transaction Sort Program	4.3.8	286
PSRLNGP	EP0160	Sort Language Processor Program	5.3.2	449
PSRMFTR	EP0070	Master File Transaction Sort Program	4.3.4	187
PSRNEEF	EP0010	NEDS Emission Factor File Transaction Sort Program	4.2.2	52
PSRNETR	EP0050	NEDS Transaction Sort Program	4.3.2	136

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Figure 1.1-b - continued. EIS/PS Programs

Code	File
E	Emission Factor File
M	Master File
T	Transaction File

Figure 1.1-c. File Codes

Procedure Names	Description	Program(s) Executed	Procedure Reference	Page Number
EPCET10	NEDS to EIS/PS Master File Transaction Conversion-Edit	PSRNETR (EP0050) PCENETR (EP0060)	4.3.3.5	167
EPCVE10	NEDS to EIS/PS Emission Factor File Transaction Conversion	PSRNEEF (EP0010) PCVNEEF (EP0020)	4.2.3.5	63
EPEDT10	Master File Transaction Edit	PSRMFTR (EP0070) PEDMSTR (EP0080)	4.3.5.5	216
EPEME10	Emission Factor File Edit-Maintenance	PSREFTR (EP0030) PEMEFAC (EP0040)	4.2.5.5	96
EPEME20	Emission Factor File Edit-Maintenance from NEDS Emission Factor File Transactions	PSRNEEF (EP0010) PCVNEEF (EP0020) PSREFTR (EP0030) PEMEFAC (EP0040)	4.4.2	345
EPEMM10	Master File Edit-Maintenance	PSRMFTR (EP0070) PEDMSTR (EP0080) PSREFIN (EP0090) PMSEFIN (EP0100) PSRINTR (EP0110) PFMMSTR (EP0120)	4.4.3	355
EPFMM10	Master File Maintenance	PSRINTR (EP0110) PFMMSTR (EP0120)	4.3.9.5	304
EPFMM20	Master File Maintenance from NEDS transactions	PSRNETR (EP0050) PCENETR (EP0060) PSREFIN (EP0090) PMSEFIN (EP0100) PSRINTR (EP0110) PFMMSTR (EP0120)	4.4.4	368

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Figure 1.1-d. EIS/PS Cataloged Procedures

Procedure	Description	Program(s) Executed	Procedure Reference	Page Number
EPFMM30	Master File Maintenance from Emission Factor Transactions	PMSEFGN (EP0130) PSREFIN (EP0090) PMSEFIN (EP0100) PSRINTR (EP0110) PFMMSTR (EP0120)	4.4.5	381
EPMSM10	Master File Emission Factor Transaction Generation	PMSEFGN (EP0130) PSREFIN (EP0090) PMSEFIN (EP0100)	4.3.10.5	331
EPMST10	Master File Internal Transaction Emission Factor Insertion	PSREFIN (EP0090) PMSEFIN (EP0100)	4.3.7.5	274
EPMST20	Internal Transaction File Concatenation	PMSTCON (EP0190)	5.4.2.5	479
EPRPE10	Emission Factor File Detailed Report	PRPEFAC (EP0230)	6.3.4.5	554
EPRPM10	Annual Report	PRPENTR (EP0200)	6.2.2.5	513
EPRPM20	Master File Detailed Report	PRPMSTR (EP0210)	6.3.2.5	536
EPRPM30	Master File Formatted Dump	PRPDUMP (EP0220)	6.3.3.5	545
EPRPM50	Master File Emissions Projection	PRPEPRJ (EP0250)	6.4.2.5	573
EPRPM60	Quick Look Report	PRTQLED (EP0260) PRTQLEX (EP0270) PRPQUIK (EP0280)	6.5.4.5	673
EPRPM70	Quick Look Turnaround Document	PRTQLED (EP0260) PRTQLEX (EP0270) PRPQTRN (EP0290)	6.5.5.5	687

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Figure 1.1-d - continued. EIS/PS Cataloged Procedures.

Procedure	Description	Program(s) Executed	Procedure Reference	Page Number
EPRTM10	Retrieval Language Processor (Generate and Store Program)	PRTLNGP (EP0140)	5.2.2.5	414
EPRTM20	Generated Retrieval (Execute Stored Program)	PRTGENR (EP0150)	5.2.3.5	439
EPRTM30	Retrieval	PRTLNGP (EP0140) PRTGENR (EP0150)	5.5.2	488
EPRTM40	Quick Look Extract	PRTQLED (EP0260) PRTQLEX (EP0270)	6.5.3.5	661
EPSRM10	Sort Language Processor (Generate and Store Program)	PSRLNGP (EP0160)	5.3.2.5	454
EPSRM20	Generated Sort (Execute Stored Program)	PSRGENR (EP0170)	5.3.3.5	470
EPSRM30	Sort Generation	PSRLNGP (EP0160) PSRGENR (EP0170)	5.5.3	496

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Figure 1.1-d - continued. EIS/PS Cataloged Procedure

1.2 DEFINITIONS OF TERMS AND CONVENTIONS

ABORT:

The termination of a job due to a malfunction. Any condition that causes an abort error message in any of the EIS/PS programs will cause the execution of that program to be terminated immediately but will allow any successive programs in the same run stream to be executed; however, the results of any such programs are probably invalid. Programs may also abort with a system error message. In this case, no successive programs will be executed.

Action Code:

An EIS/PS master file transaction field. See Figure 4.3.5-b for a complete description. Also, an emission factor file transaction field (see Figure 4.2.5-c).

AEROS:

An acronym for the Aerometric and Emissions Reporting System.

Allowable Emissions:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

ANS (ANSI):

An acronym for the American National Standards Institute, which establishes the standards for the COBOL and FORTRAN languages.

Answer File:

A file that is produced by a retrieval and is a subset of the records in the master file. An answer file can also be produced by the generated sort and is a group of subsets of the records in the master file.

An answer file can be input to any program that uses the master file for the purpose of generating reports; however, an answer file may contain duplicate records and may not be in the normal master file order. See Sections 5.2 and 5.3. Note: An answer file should not replace the master file for file maintenance purposes.

Apportioned Emissions:

An EIS/PS master file field. See Figure 4.3.9-a for a complete description.

AQCR:

The Air Quality Control Region is an EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Ash Content:

An emission factor file field. See Figure 4.2.5-d for a complete description.

Ash Flag:

An emission factor file field. See Figure 4.2.5-d for a complete description.

Ash-Sulfur Code:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Apportioned Emissions:

An EIS/PS master file field. See Figure 4.3.9-a for a complete description.

Baseline:

A version of the EIS/PS system maintained by NADB. All installation and update copies are made from the baseline. If local modifications are made to EIS/PS, a copy of the baseline should be maintained. Only the baseline EIS/PS is supported by NADB.

BEC Code:

Basic Equipment Code, an EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Block:

A group of records handled by the computer as a single unit. The size of a block should be set to take best advantage of the size of a track if the file is to be stored on disk.

Blocking Factor:

The number of records in a block. Information on the blocking factors for the files in the EIS/PS system can be found in Appendix D.

Boiler Design Capacity:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Card:

A punched card used to enter data into the computer. The 80-column card is used for EIS/PS. Each column of a card is used to enter a single numeric or alphabetic character, and one card is used for a single transaction. Transactions may be entered by other methods that do not use cards, but the term card is still used to denote a transaction.

Card Type:

An EIS/PS master file transaction field. See Figure 4.3.5-b for a complete description. Also, an emission factor file transaction field (see Figure 4.2.5-d).

Catalog:

A table of descriptive information for files, such as unit, volume, and DCB information, which is maintained by the computer. A cataloged data set can be used by specifying its name and disposition.

Cataloged Data Set:

A data set that has been listed in the system catalog of files. Items such as unit, volume, and DCB information for the data set are contained in the system catalog.

Category 1 thru 4:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

CDHS:

The Comprehensive Data Handling System (CDHS) consists of the Air Quality Data Handling System II (AQDHS-II) and the Emissions Inventory System (EIS). EIS in turn consists of two parts: EIS/AS (Area Source) and EIS/PS (Point Source).

City:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

COBOL:

An acronym for COmmon Business Oriented Language. It is an internationally accepted programming language used for systems that handle large data bases. The statements are English-like but must comply with rules established for the language. All of the programs in EIS/PS are written in COBOL.

Comment:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Comment Record:

A type of record in the EIS/PS master file. See Section 4.3.9 for a complete description.

Compile:

To create an object module from source language statements by means of a compiler. While some compilers generate object modules which contain machine code that can be executed directly, most generate code must be further processed by a linkage editor to produce an executable load module. In most EIS/PS installations, the linkage editor is used.

Compliance Schedule:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Compliance Status:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Compliance Update:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

CONDITIONAL:

A type of error message generated by programs in EIS/PS. Conditional errors are not serious enough to cause rejection of the input data; however, the message cannot be suppressed.

Confidentiality:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Contact:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Control Card:

A card entered to provide specific instructions to a program. 'Control Card' is used interchangeably with 'option card'.

Control Equipment Cost:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Control Regulations:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

County:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Cylinder:

Used in allocating space on a direct access device (disk). As a unit of measure, it contains several tracks, the exact number being dependent upon the type of disk.

Data:

A general term used to describe the elements of information that can be processed by a computer. 'Data' is used to describe all the information collected and stored for EIS/PS.

Date:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Deck:

A collection or pack of punched cards. The cards necessary to run a job (including JCL, option cards, and transactions) form a deck.

Diagnostic Report:

A report printed during the execution of most programs in EIS/PS. The report contains the update messages, information on the options used for the program, messages explaining errors encountered during the execution of the program, and run statistics indicating the number of records processed and the number of errors found. Those EIS/PS programs that do not produce a separate diagnostic report contain the diagnostic information at the beginning and end of other printed output.

DISASTER:

A type of error message printed by EIS/PS programs. Execution of the program will be terminated immediately when a disaster condition is encountered, but other programs in the same run stream will be executed and produce unpredictable results. The user should contact NADB for information on recovering from a disaster condition.

Disk:

A flat circular plate upon which data is stored by a magnetic process. Also called a magnetic disk. In large computer systems, one or more magnetic disks are mounted on a spindle and form a disk pack. Each disk is divided conceptually into tracks, and tracks are combined into cylinders. Space may be allocated by tracks or cylinders. A disk is a direct access device.

ECAP:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

EIS:

The Emissions Inventory System processes emissions data. It consists of two subsystems: Point Source (EIS/PS) and Area Source (EIS/AS).

EMF Origin:

An EIS/PS master file transaction field. See Figure 4.3.5-b for a complete description.

EMF Source:

An EIS/PS master file transaction field. See Figure 4.3.5-b for a complete description.

EMF Units:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Emission Factor:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Emission Factor File:

An EIS/PS file. See Section 4.2 for a complete description.

Emissions Units:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Error Message:

In EIS/PS, the term is used two ways. First, it is used as a general term to include all types of messages (WARNING, CONDITIONAL, ERROR, ABORT, and DISASTER) printed when an error is encountered by a program. Secondly, it refers specifically to messages prefaced by the word ERROR which indicate that input data has been rejected due to the error found therein, but that processing will continue.

Estimated Control Efficiency:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Estimated Emissions:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Estimation Method:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Execute:

To perform the operations specified by a particular program or procedure.

Exhaust Flow Rate:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Field:

A subdivision of a record containing a particular item of data. Examples of fields in EIS/PS include state code, pollutant ID, and name-address.

File:

An organized collection of related records. The records in a file are usually sequenced by some key contained in the records. Files may be stored for future use (permanent) or used by only one job (temporary). One of more files may be on a tape or a disk. Permanent files used by EIS/PS include the master file and the emission factor file.

Format:

A specified or predetermined arrangement of data in a record or on a document; synonymous with layout. Formats given for the files in EIS/PS include the position, length, and description of each field.

Fuel Process Rate:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Fuel Units:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Hardware:

The physical equipment making up a computer system. Hardware includes printers, card readers, disk and tape drives, terminals, and the central processing unit of a computer.

Heat Content:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Installation:

Two definitions are used by EIS/PS. The first pertains to setting up the EIS/PS system for the first time. The second refers to a particular computer system, the people who operate and use it, the work it does, and the place where it is located.

Internal Transaction:

A record created by the master file transaction edit program or the NEDS to EIS/PS conversion-edit program and used by the master file maintenance program to update the master file. These records are not 80 characters in length and are not interchangeable with punched cards used to enter transactions.

IPP Code:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

JCL:

Job Control Language. A programming language used to identify a job and describe its requirements to the operating system. Information on JCL can be found in Section 8.1.

Job:

A unit of work entered into the computer by means of a single run stream containing a single job card. A job consists of one or more procedures or programs.

Key:

One or more fields within a record used to identify or control that record. Keys are used by EIS/PS both to sequence files and to match transactions with file records when updating a file.

Latitude:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Library:

An organized set of programs or files. In EIS/PS, partitioned data sets are used as libraries to store source programs, load modules, and procedures.

Link Edit:

To combine object modules into an executable load module. In EIS/PS, all programs are link edited after being compiled, and the resulting load modules are stored in a load library.

Load Module:

The output of a linkage editor; a program in a suitable form to be loaded into memory and executed. Load modules are stored in the load library.

Local Control:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Longitude:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Mailing Address:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Master File:

An EIS/PS file containing the actual point source data, as collected. The master file is used to generate reports, including sending the annual report to NEDS. File formats and field descriptions can be found in Section 4.3.9.2.

Maximum Design Rate:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Measured Emissions:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Module:

A group of records treated as a unit; it often refers to an individual member of a partitioned data set or library. Each program in EIS/PS is stored as a module in both the source and load libraries.

NADB:

The National Air Data Branch, which is in the EPA's Office of Air Quality Planning and Standards.

Name and Address:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

NEDS:

An acronym for National Emissions Data System. It refers to both a technique for coding emissions data and a data base maintained by EPA containing emissions data from the entire United States.

NEDS Point ID:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

NEDS P7 Comment:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Normal Operating Rate:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Number of Employees:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Number of Point Pollutants:

An EIS/PS master file field. See Figure 4.3.9-a.

Number of SCC Pollutants:

An EIS/PS master file field. See Figure 4.3.9-a.

Object Module:

A module that is produced by a compiler and input to a linkage editor. Object modules are not saved in EIS/PS since the compiler and linkage editor are executed within one procedure.

Option Card:

A card used to provide instructions to a program. Used interchangeably with 'control card'. Options are used in EIS/PS to indicate such things as whether files should be listed, whether warnings should be printed, or the number of lines to be printed on a page.

Ownership Code:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Partitioned Data Set:

A file containing several individual groups of records. This file can be used as a whole, or each group of records (module) can be used alone. In

EIS/PS, partitioned data sets are used as libraries to store the source programs, the load modules, and the procedures.

Percentage Annual Thruput:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Permanent File:

A file kept after execution of a job has been completed. Such a file can be used by later jobs and can be cataloged. Examples of permanent files in EIS/PS include the master and emission factor files.

Plant ID:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Plant Record:

A type of EIS/PS master file record. See Section 4.3.9 for a complete description.

Plume Height:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

PNR Line Number:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

PNR Sequence Number:
An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Point Pollutant ID:
An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Points With Common Stack:
An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Point Record:
A type of EIS/PS master file record. See Section 4.3.9 for a complete description.

Pollutant Name:
An EIS/PS emission factor file field. See Figure 4.2.5-d for a complete description.

Potential Emissions:
An EIS/PS master file field. See Figure 4.3.9-a.

Primary Control Equipment:
An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Principal Product:
An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Procedure:

A series of JCL statements used to execute one or more programs. In EIS/PS, the procedures are stored and cataloged in a procedure library. A program can be executed by naming the procedure without supplying all the required JCL needed for that program.

Program:

A series of statements in a language acceptable to a computer and used to achieve a specified result.

Property Area:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Record Size:

An EIS/PS master file field. See Figure 4.3.9-a.

Record Type:

An EIS/PS master file field. See Figure 4.3.9-a.

Run Stream:

A deck consisting of JCL cards and, possibly, option cards and transactions that is used to execute one or more successive procedures. Generally, a run stream will contain one job.

SCC:

Source Classification Code, an EIS/PS master file field. See Figure 4.3.5-b for a complete description.

SCC Pollutant ID:
An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

SCC Record:
A type of EIS/PS master file record. See Section 4.3.9 for a complete description.

SCC Sequence Number:
An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Secondary Control Equipment:
An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

SIC Code:
Standard Industrial Classification, an EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Software:
All programs which can be used on a particular computer system. Includes compilers, library routines, and user-written programs.

Source Code:
An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Source Description:
An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Source Program or Source Module:

A program written in a programming language that cannot be directly processed by the computer, but which must be compiled and link edited prior to being executed. The source programs in EIS/PS are written in COBOL.

Space:

A variable used in JCL to indicate the amount of room occupied by a file on a direct access device (disk). Space is allocated in either tracks or cylinders.

Space Heat Percentage:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Stack Diameter:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Stack Height:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Stack Temperature:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

State:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Structured Programming:

A coding technique used in EIS/PS. See Section 2.2.

Substitutable Parameters:

Variables in the EIS/PS procedures which may change from one run of a procedure to the next, and which can be changed by specifying keywords defined in the procedure along with the values to be used. A list of the substitutable parameters is given with the information on individual procedures in the user's guide.

Sulfur Content:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Sulfur Flag:

An emission factor file field. See Figure 4.2.5-d for a complete description.

Systems Personnel:

People involved with the user support and/or operations for a computer installation. Systems personnel can supply information, such as disk and tape drives used, required account codes, and installation-dependent conventions, and can give assistance in correcting system problems.

Tape:

A magnetic film coated with a substance which allows data to be stored by selective magnetism. Tapes can be used to store files for EIS/PS. The user should consult his systems personnel for information on the characteristics of the tape drives used at his installation.

Telephone:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Temporary File:

A file used during the duration of one job and then discarded. Temporary files are used to pass data from one program to another within the same job.

Test Method:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Top-down:

A term used in structured programming. See Section 2.2.

Track:

A unit of measure for space allocation on a disk. The size of a track is dependent upon the type of disk used.

Transaction:

A card (or other record) used to enter data into the system. All transactions are edited by the EIS/PS programs prior to being used.

Unit of Measure Code:

An EIS/PS emission factor file field. See Figure 4.2.5-d for a complete description.

Units Description:

An EIS/PS emission factor file field. See Figure 4.2.5-d for a complete description.

Update Message:

A portion of the diagnostic report printed at the beginning of the execution of each program in EIS/PS. Information given includes the name, revision level, update status, and update date of the program. The information is useful for troubleshooting.

User Control Region:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

User Plant ID:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

User Point ID:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

UTM Horizontal Coordinate:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

UTM Vertical Coordinate:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

UTM Zone:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Velocity:

An EIS/PS master file field. See Figure 4.3.5-b for a complete description.

Volume:

A recording medium, such as a tape or disk, which is mounted and dismounted as a unit. A volume is identified by a volume serial number.

WARNING:

A type of error message used in EIS/PS to inform the user of an aspect of the input data which may warrant his attention. A warning condition does not cause data to be rejected or the execution of the program to be terminated. Warning messages can be suppressed.

2.0 OVERVIEW OF EIS/PS

2.1 INTRODUCTION

The National Air Data Branch (NADB) of the Environmental Protection Agency (EPA) has the responsibility of collecting, storing, retrieving, and analyzing air quality and emissions data for 50 states and 5 territories. In order to aid the data flow and to assist the states in the monitoring and control of atmospheric pollution, EPA has developed and provided the Comprehensive Data Handling System (CDHS).

The purpose of CDHS is to provide the user with a systematic approach to solving the problem of creating and maintaining files, submitting data to EPA, doing statistical analysis, and generating internal reports from a large data base of observed pollutant concentrations or emissions.

CDHS currently consists of two major systems: the Emissions Inventory Subsystem (EIS) which processes emissions data, and the Air Quality Data Handling Subsystem (AQDHS-II) which processes ambient air quality and meteorological data. EIS is further broken down into two subsystems: area source (EIS/AS) and point source (EIS/PS). This User's Guide deals only with EIS/PS and is intended to provide the user of EIS/PS with a usable day-to-day reference document.

EIS/PS currently consists of 27 computer programs (written in ANS-68 COBOL), which provide the user with a variety of tools to assist him in the enormous task of organizing, storing, and analyzing the point source emissions data collected by him.

A discussion of program structure is provided in Section 2.2, and a chart illustrating the interrelationships of the functional areas in EIS/PS is provided in Section 2.3. More detailed flow diagrams of each functional area and its component programs are provided in the section discussing that particular function.

2.2 PROGRAM STRUCTURE

The EIS/PS programs are modularized by function; i.e., each program performs one complete function. When several functions are needed for a given process (such as file maintenance), the separate programs that perform the component functions are performed in a single procedure. This modularization gives the system greater flexibility. An illustration of this modularity can be seen in the following example: PSREFTR (EP0030) sorts emission factor file transactions, PEMEFAC (EP0040) edits and maintains the emission factor file, and PRPEFAC (EP0230) prints the emission factor file. The sort and file maintenance programs are performed by the procedure EPEME10, and the report by EPRPE10. Both procedures should be run when the emission factor file is updated, but the report procedure may be run alone whenever a listing of the emission factor file is desired.

All of the programs in EIS/PS are written using American National Standard (ANS) COBOL. An attempt is made to standardize the programs so that they can be run on a variety of vendor main frames with minimal changes. Currently, the CDHS system has been installed on IBM-370, UNIVAC 1100, CDC CYBER, Honeywell 6000, AMDAHL, and ITEL series computers.

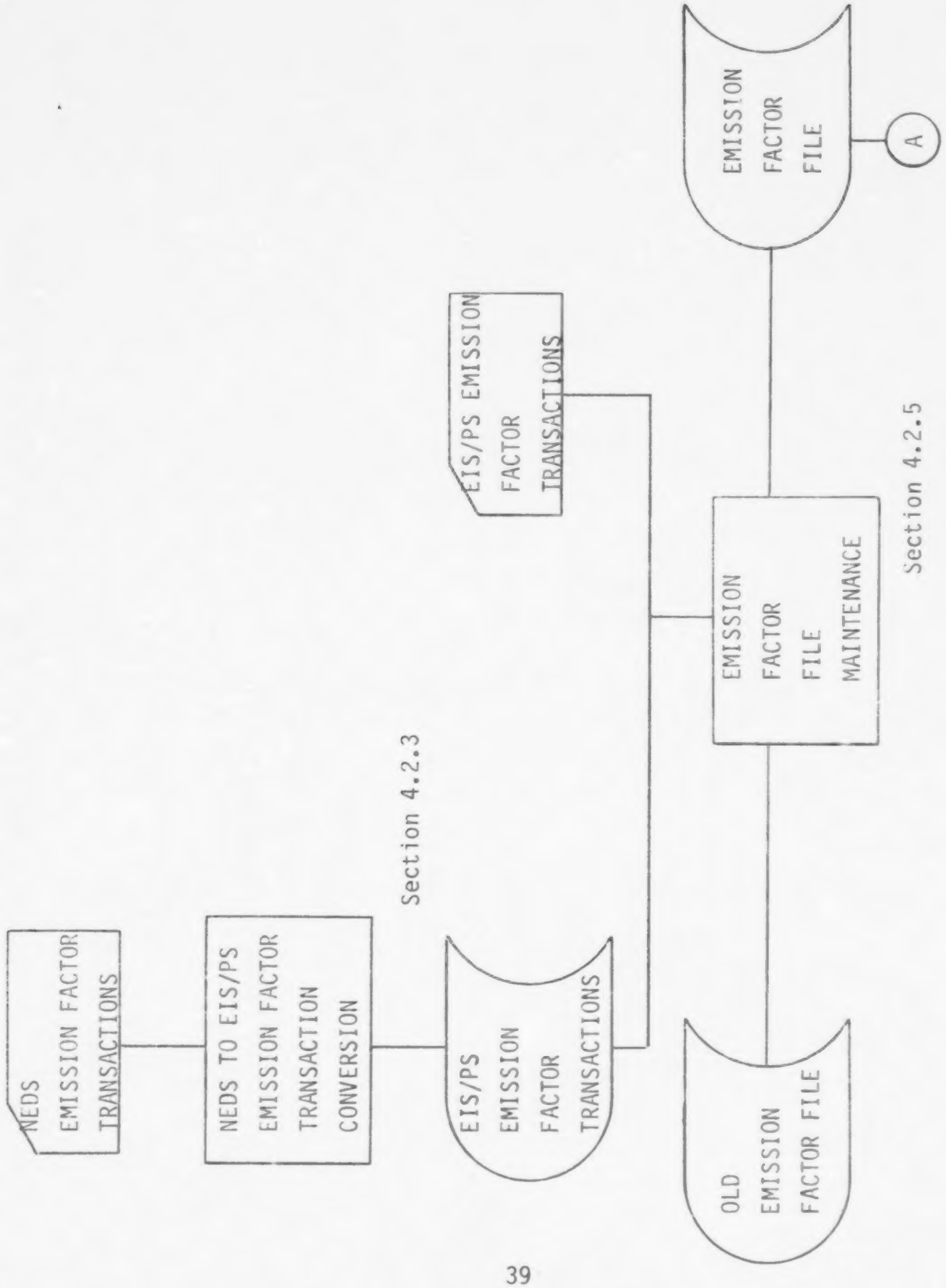
Structured programming techniques have been used in writing the programs; i.e., the programs are designed using a 'top-down' technique with control remaining in a short mainline module. The program tasks are accomplished by self-contained modules performed from the mainline. As a result of this top-down design, the programs are self-documenting. These structured techniques are not in themselves of interest to the user, but they do allow for easier maintenance of the programs when modifications or troubleshooting support are needed.

Several programs contain COBOL sorts which have been developed so that the user does not have to code system sort procedures or provide control cards. The COBOL sort is an ANS structure and should work on most computers;

however, the actual collating sequence used is determined by the default value of the hardware. As an example, EBCDIC sequence (used on IBM) sorts alphabetic characters before numeric ones, while ASCII sequence (variations used by Honeywell, UNIVAC, and CDC) sorts numeric before alphabetic characters.

2.3 SYSTEM CHARTS

A system-level flowchart of EIS/PS is shown in Figure 2.3-a. This flowchart depicts the relationships of the major processing functions of EIS/PS. Included in the flowchart are references to sections of this document that contain detailed information on each processing function. More detailed flowcharts of each function are presented in the referenced sections.



(Page 1 of 5)

Figure 2.3-a. EIS/PS System Flowchart

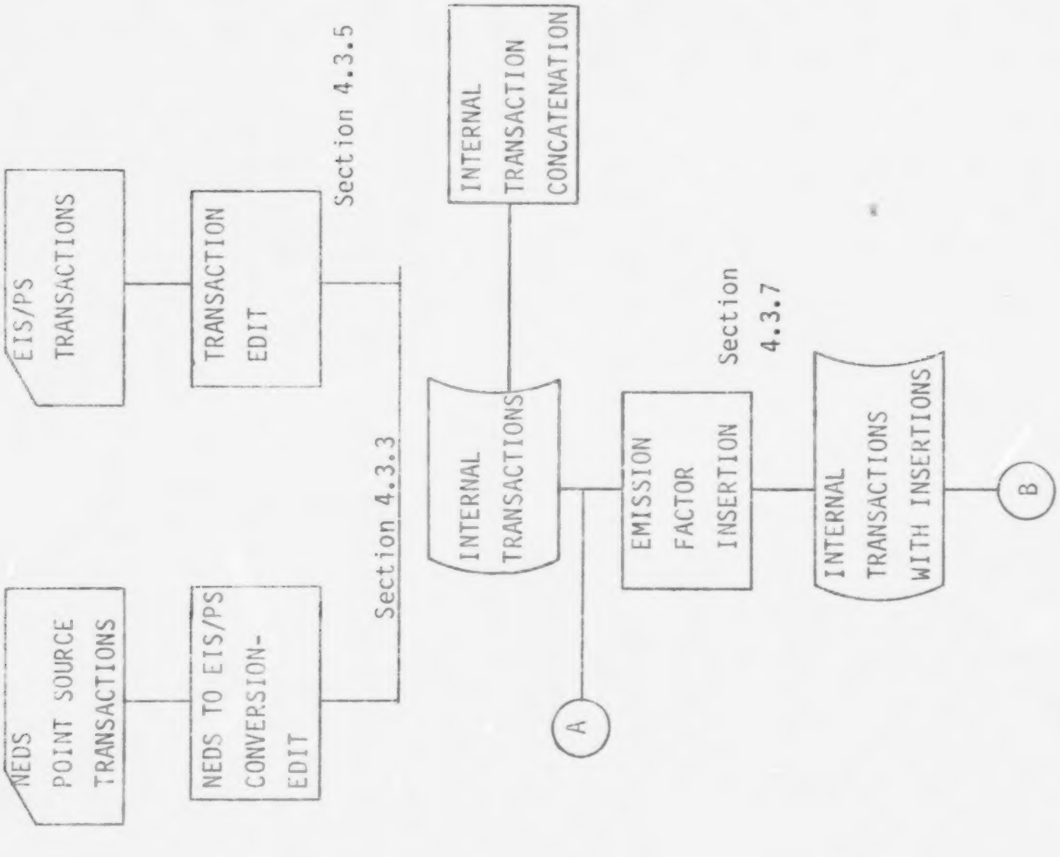
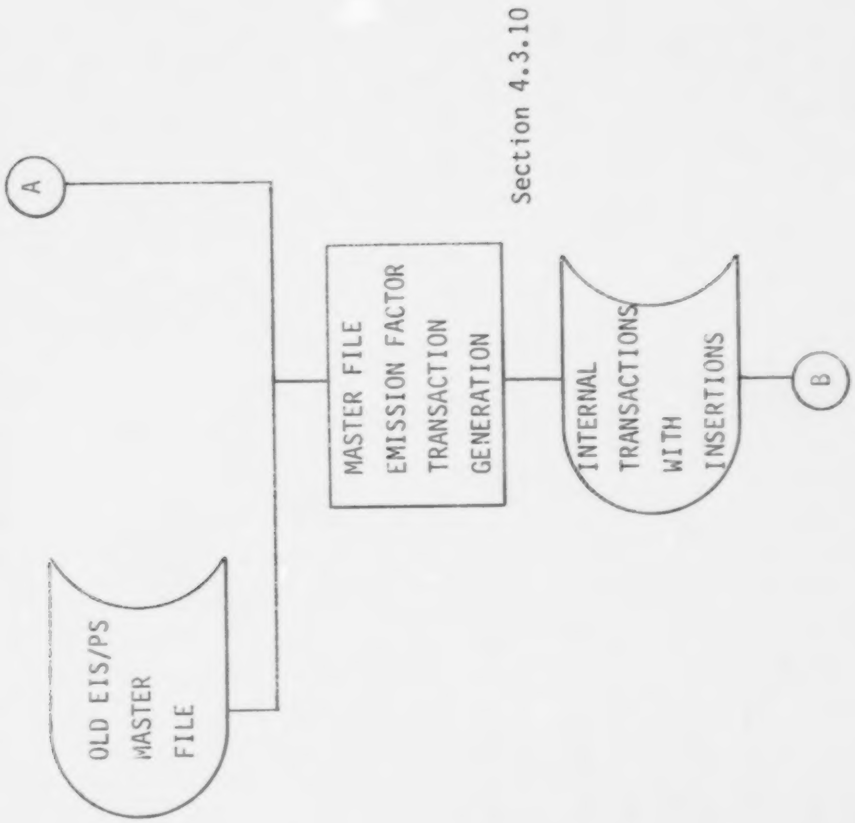

NEDS POINT SOURCE TRANSACTIONS
NEDS TO EIS/PS CONVERSION-EDIT
Section 4.3.3
EIS/PS TRANSACTIONS
TRANSACTION EDIT
Section 4.3.5
INTERNAL TRANSACTION CONCATENATION
Section 5.4.2
INTERNAL TRANSACTIONS
A
EMISSION FACTOR INSERTION
Section 4.3.7
INTERNAL TRANSACTIONS WITH INSERTIONS
B

Figure 2.3-a - continued. EIS/PS System Flowchart

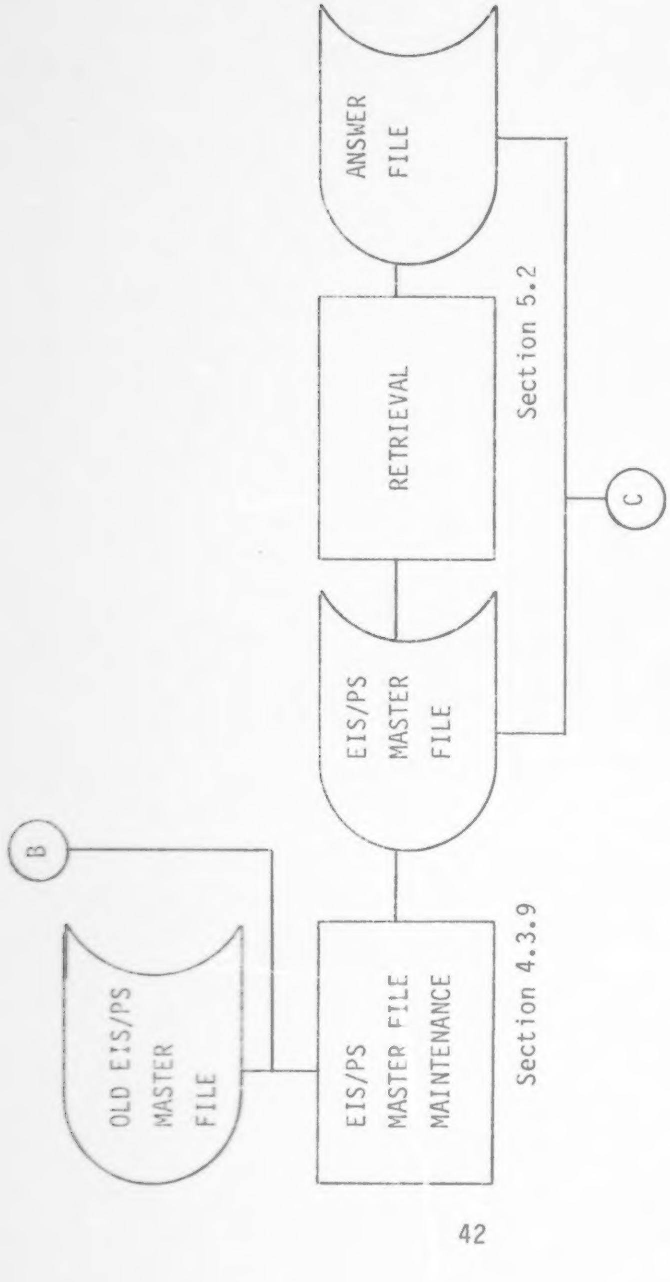
(Page 2 of 5)



A
OLD EIS/PS MASTER FILE
Section 4.3.10
MASTER FILE EMISSION FACTOR TRANSACTION GENERATION
INTERNAL TRANSACTIONS WITH INSERTIONS
B

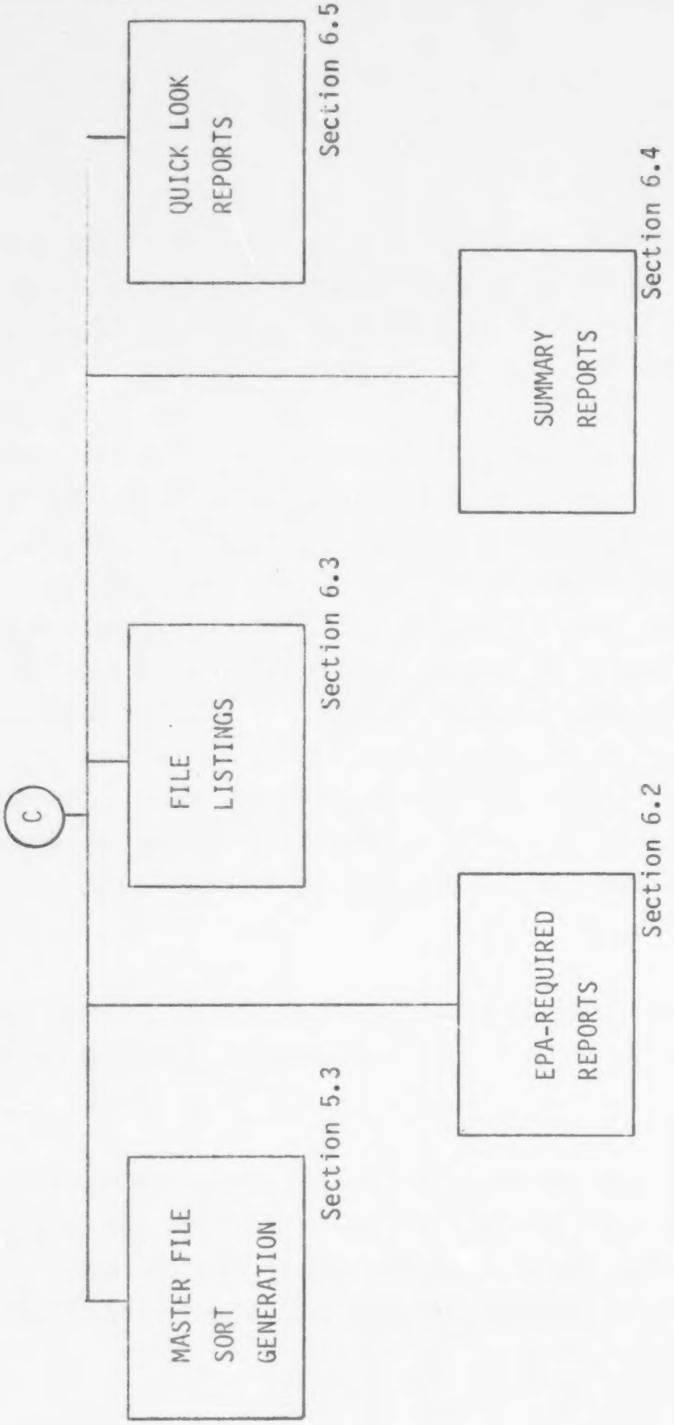
Figure 2.3-a - continued. EIS/PS System Flowchart

(Page 3 of 5)



(Page 4 of 5)

Figure 2.3-a - continued. EIS/PS System Flowchart



(Page 5 of 5)

Figure 2.3-a - continued. EIS/PS System Flowchart

3.0 ECONOMICS

3.1 ECONOMY MEASURES

Several steps can be taken to reduce the cost of using the EIS/PS system, such as keeping the size of the files as small as possible, printing files only when necessary, storing frequently used retrievals, and updating files only when a substantial number of transactions are available.

Since the cost of running any program is directly related to the size of the files processed by that program, the user's files should be as small as possible. Note that the file maintenance program only flags master file records for deletion; that is, deleted records physically remain in the file and must be processed by every program reading that file. The annual report program, PRPENTR (EP0200), physically removes records which are flagged for deletion from the master file when it creates the NEDS or EIS/PS transactions from that file. The size of the input master file which is processed by a report program can be reduced without actually reducing the size of the master file by running the retrieval package prior to generating the report; thus, only the desired data is printed. See Section 5.2 for information on retrievals.

The size of the emission factor file can be controlled by assuring that it contains only information actually in use; i.e., that it precisely reflects the master file data.

Several programs have a LIST option. This option allows for complete files to be printed, usually confirmation listings of the input and output files. Since printing the files does add to the cost of running these programs, the LIST option should only be used when a listing or audit trail is required; otherwise, the NOLIST option should be used. Some programs, especially those that edit transactions, also contain a FLAGW option which causes all warning messages to be printed. Using the NOFLAGW option (and thus suppressing the warning messages) will reduce the cost of running these programs.

Another cause of unnecessary cost is running the entire retrieval process using identical retrieval specifications to retrieve the same data from different files. If it is known that a set of retrieval specifications will be executed multiple times, the load module created in the first execution should be stored. This allows the retrieval language processor to be bypassed and only the retrieval itself to be executed. The cataloged procedures EPRTM10 (see Section 5.2.2.5) and EPRTM20 (see Section 5.2.3.5) are provided to facilitate the creation and re-execution of retrievals.

Another form of unnecessarily repeated program execution is updating the master file each time transactions are edited. Since a large part of the cost of updating a file is the actual processing of the file (i.e., reading, searching, and writing), as many transactions as possible should be entered in one update run. This can be accomplished by editing the various batches of transactions as they are coded, saving the resulting internal transactions, and concatenating them for one execution of file maintenance. The cataloged procedures EPEDT10 (see Section 4.3.5.5) and EPFMM10 (see Section 4.3.9.5) provide the means of doing this.

Additional cost considerations are included in the discussions of the individual EIS/PS programs. These considerations include the cost of a sample run of the program and, where applicable, information on how to reduce the cost.

4.0 FILE CREATION AND MAINTENANCE

4.1 INTRODUCTION

The primary file in the EIS/PS system is the master file which contains the user's point source emissions data. The EIS/PS system allows the user to place data in the master file and extract data from the master file for reports, including the EPA-required annual report.

There are two auxiliary files which contain emission factor data: the emission factor file and the emission factor description file. The emission factor file is used to insert emission factor information into master file transactions and to generate master file transactions when udpates to emission factor information in the master file is needed. The emission factor description file is only used to produce a detailed report of the emission factor file.

All of the files in EIS/PS are sequential files (i.e., the file records are read sequentially from beginning to end). The emission factor and the emission factor description files contain fixed-length records; the master file contains variable-length records.

4.2. EMISSION FACTOR FILE

4.2.1. INTRODUCTION

Emission factor information is contained in two files: the emission factor file and the emission factor description file. These files are created and maintained by EIS/PS emission factor file transactions. The EIS/PS transactions can be coded directly or created by converting NEDS emission factor file transactions, see PCVNEEF (EP0020).

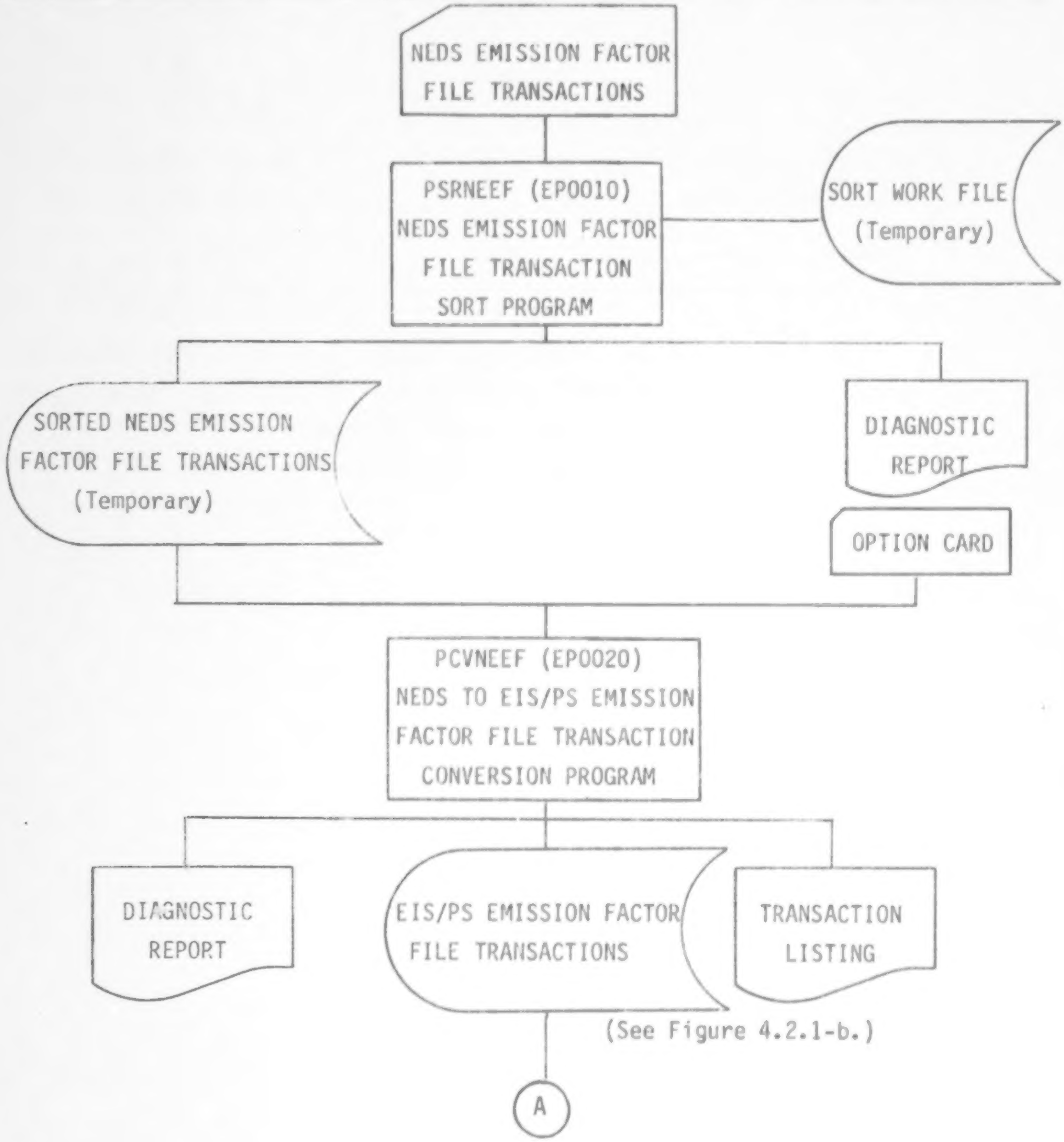
Two programs must be executed to convert NEDS emission factor file transactions to EIS/PS emission factor file transactions. These programs are the NEDS emission factor file transaction sort program, PSRNEEF (EP0010), and the NEDS to EIS/PS emission factor file trans-action conversion program, PCVNEEF (EP0020). PSRNEEF (EP0010) sorts the input NEDS emission factor file transactions and passes the sorted transactions to PCVNEEF (EP0020), which converts the sorted NEDS emission factor file transactions to EIS/PS emission factor file transactions. See Figure 4.2.1-a for a flowchart illustrating the conversion from NEDS to EIS/PS emission factor file transactions.

Once EIS/PS emission factor file transactions are obtained (either by coding or by conversion from NEDS emission factor file transactions), two programs are executed to create or update the emission factor file: the emission factor file transaction sort program, PSREFTR (EP0030), and the emission factor file edit-maintenance program, PEMEFAC (EP0040).

PSREFTR (EP0030) sorts the EIS/PS emission factor file trans-actions and passes them to PEMEFAC (EP0040). PEMEFAC (EP0040) edits the sorted transactions and uses those transactions that pass the edit criteria to create or update the emission factor and the emission factor description files. No old emission factor or emission factor description files are input to PEMEFAC (EP0040) when the initial files are being created; however, when existing files are being updated, those files are input to PEMEFAC (EP0040). See Figure 4.2.2-b for a flowchart illustrating the emission factor file edit-maintenance procedure.

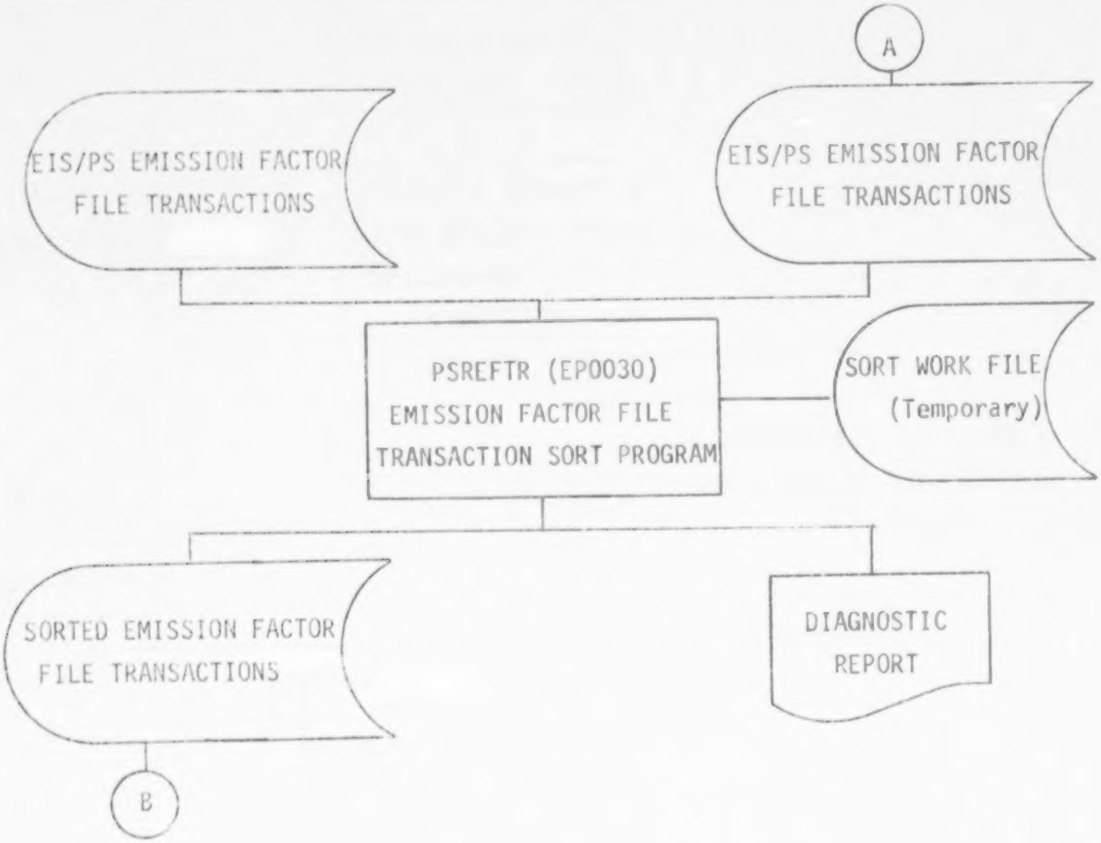
Refer to Sections 4.2.2, 4.2.3, 4.2.4, and 4.2.5 for detailed discussions of PSRNEEF (EP0010), PCVNEEF (EP0020), PSREFTR (EP0030), and PEMEFAC (EP0040), respectively.

PSRNEEF (EP0010) and PCVNEEF (EP0020) can be executed using the cataloged procedure EPCVE10, which is discussed in Section 4.2.3.5. The programs PSREFTR (EP0030) and PEMEFAC (EP0040) can be executed using the cataloged procedure EPEME10, discussed in Section 4.2.5.5. All four programs can be executed (combining both the conversion from NEDS emission factor file transactions and the emission factor file edit-maintenance) using the cataloged procedure EPEME20, discussed in Section 4.4.2.



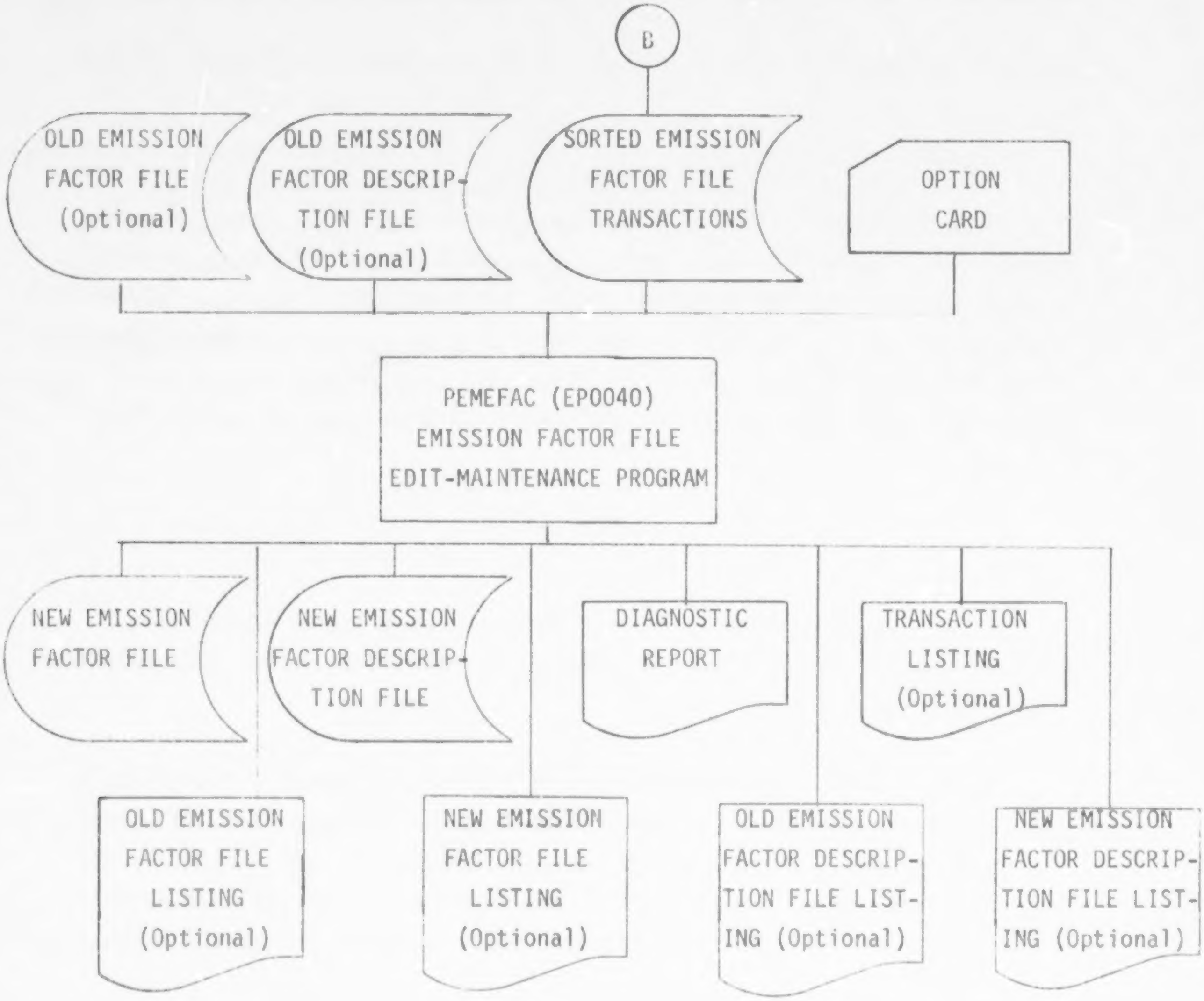
NEDS EMISSION FACTOR FILE TRANSACTIONS
PSRNEEF (EP0010) NEDS EMISSION FACTOR FILE TRANSACTION SORT PROGRAM
SORT WORK FILE (Temporary)
SORTED NEDS EMISSION FACTOR FILE TRANSACTIONS (Temporary)
DIAGNOSTIC REPORT
OPTION CARD
PCVNEEF (EP0020) NEDS TO EIS/PS EMISSION FACTOR FILE TRANSACTION CONVERSION PROGRAM
DIAGNOSTIC REPORT
EIS/PS EMISSION FACTOR FILE TRANSACTIONS
TRANSACTION LISTING
(See Figure 4.2.1-b.)
A

Figure 4.2.1-a. NEDS to EIS/PS Emission Factor File Transaction Conversion Flowchart


A
EIS/PS EMISSION FACTOR FILE TRANSACTIONS
EIS/PS EMISSION FACTOR FILE TRANSACTIONS
PSREFTR (EP0030) EMISSION FACTOR FILE TRANSACTION SORT PROGRAM
SORT WORK FILE (Temporary)
SORTED EMISSION FACTOR FILE TRANSACTIONS
DIAGNOSTIC REPORT
B

(page 1 of 2)

Figure 4.2.1-b. Emission Factor File Edit-Maintenance Flowchart


B
OLD EMISSION FACTOR FILE (Optional)
OLD EMISSION FACTOR DESCRIPTION FILE (Optional)
SORTED EMISSION FACTOR FILE TRANSACTIONS
OPTION CARD
PEMEFAC (EP0040) EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM
NEW EMISSION FACTOR FILE
NEW EMISSION FACTOR DESCRIPTION FILE
DIAGNOSTIC REPORT
TRANSACTION LISTING (Optional)
OLD EMISSION FACTOR FILE LISTING (Optional)
NEW EMISSION FACTOR FILE LISTING (Optional)
OLD EMISSION FACTOR DESCRIPTION FILE LISTING (Optional)
NEW EMISSION FACTOR DESCRIPTION FILE LISTING (Optional)

(Page 2 of 2)

Figure 4.2.1-b - continued. Emission Factor File Edit-Maintenance Flowchart

4.2.2 NEDS EMISSION FACTOR FILE TRANSACTION SORT PROGRAM - PSRNEEF (EP0010)

4.2.2.1 Description

PSRNEEF (EP0010) sorts NEDS emission factor file transactions into the sequence required by the NEDS to EIS/PS emission factor file transaction conversion program, PCVNEEF (EP0020); Figure 4.2.2-a details this sort order. All NEDS emission factor file transactions must be sorted by PSRNEEF (EP0010) before they can be converted to EIS/PS emission factor file transactions. See Section 4.2.3 for additional information on the NEDS emission factor file transactions.

4.2.2.2 File Formats

Input to this program consists solely of NEDS emission factor file transactions. Refer to Figure 4.2.3-a for a description of the NEDS emission factor file transaction format.

PSRNEEF (EP0010) produces two output files: a diagnostic report and a temporary file containing the sorted NEDS emission factor file transactions. The sorted transactions are in the correct sequence for use as input to the NEDS to EIS/PS emission factor file transaction conversion program, PCVNEEF (EP0020). An example of the diagnostic report is shown in Figure 4.2.2-b.

4.2.2.3 Options and Control Cards

There are no options.

4.2.2.4 Error Messages

***PSRNEEF 001 ERROR - INVALID ACTION CODE, TRANSACTION REJECTED

Meaning: Valid action codes are A (add), C (change) and D (delete).

Action: Correct the error and resubmit the transaction.

4.2.2.5 Cataloged JCL

PSRNEEF (EP0010) should always be executed in conjunction with the NEDS to EIS/PS emission factor file transaction conversion program, PCVNEEF (EP0020). See Section 4.2.3.5 for a discussion of the cataloged procedure EPCVE10, which executes both programs.

4.2.2.6 Warnings and Special Instructions

Note that the COBOL sort verb is used in this program; therefore, the collating sequence for alphanumeric fields is determined by the computer at the user's particular installation.

In addition to the diagnostic report produced by PSRNEEF (EP0010), messages generated by the sort-merge package will be printed. The format and content, as well as the physical location, of these messages depend upon the user's particular installation.

4.2.2.7 Cost Considerations

The following estimates are for the execution of PSRNEEF (EP0010) on an IBM 370/168:

Number of NEDS emission factor file transactions:	327 records
CPU time:	2.08 seconds
I/O time:	9.16 seconds
Total time:	11.24 seconds
Estimated cost:	$5.47

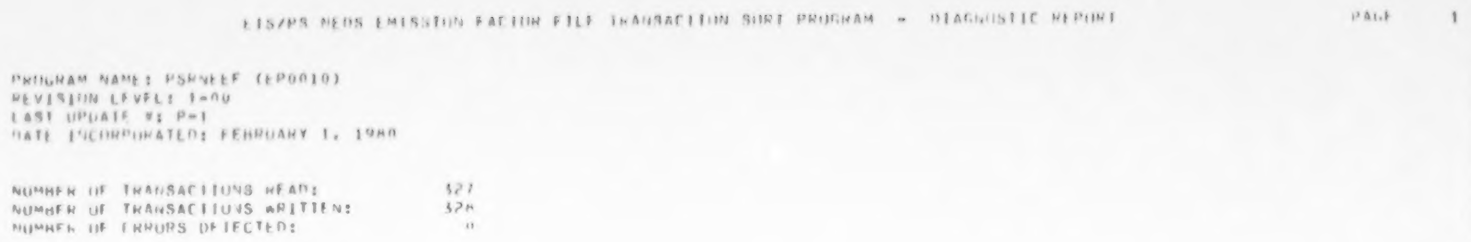
4.2.2.8 Related Programs and Procedures

PSRNEEF (EP0010) should always be executed in conjunction with the NEDS to EIS/PS emission factor file transaction conversion program, PCVNEEF (EP0020). The cataloged procedure EPCVE10 executes both programs.

Also, PSRNEEF (EP0010) and PCVNEEF (EP0020) can be executed in conjunction with the emission factor file transaction sort program, PSREFTR (EP0030), and the emission factor file edit-maintenance program, PEMEFAC (EP0040), by the cataloged procedure EPEME20. See Section 4.4.2 for a discussion of this procedure.

Record Position	Description	Sort Sequence
1 - 8	SCC	Ascending
80	Card Type	Ascending
10	Action Code	Ascending

Figure 4.2.2-a. Sort Sequence for NEDS Emission Factor File Transactions



```
              EIS/PS NEDS EMISSION FACTOR FILE TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                PAGE     1

PROGRAM NAME: PSRNEEF (EP0010)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF TRANSACTIONS READ:            327
NUMBER OF TRANSACTIONS WRITTEN:         328
NUMBER OF ERRORS DETECTED:                0
```

Figure 4.2.2-b. Diagnostic Report

4.2.3 NEDS TO EIS/PS EMISSION FACTOR FILE TRANSACTION CONVERSION PROGRAM - PCVNEEF (EP0020)

4.2.3.1 Description

PCVNEEF (EP0020) converts NEDS emission factor file transactions to EIS/PS emission factor file transactions which can be used to create or update the EIS/PS emission factor and description files. General editing is performed on each NEDS transaction prior to its conversion.

The NEDS emission factor file transactions must be sorted into SCC/card-type/action-code sequence prior to being input to PCVNEEF (EP0020). See Section 4.2.2 for a discussion of the NEDS emission factor file transaction sort program, PSRNEEF (EP0010), which sorts the transactions into the required sequence. The SCC number must be a valid SCC number from '00000000' to '99999998'; the card type must be '1', '2', or '3'; and the action code must be 'A' (add), 'C' (change), or 'D' (delete). There can be a maximum of three NEDS transactions, one of each type, associated with a given SCC number. Also, all NEDS transactions associated with a given SCC number must contain the same action code. Therefore, it is not possible to have delete transactions, add transactions, and change transactions for the same SCC number in the same run.

The NEDS transactions are converted into EIS/PS transactions, of which there are four types. Types 1, 2, and 3 are used to create or update records in the EIS/PS description file and type-4 transactions are used to create or update records in the EIS/PS emission factor file.

Data from a NEDS type-1 transaction is transferred to data fields of EIS/PS type-1 and type-2 transactions. Data from a NEDS type-2 transaction is transferred to data fields of EIS/PS type-2 and type-3 transactions. A NEDS type-3 transaction is used to create EIS/PS type-4 transactions for the five criteria pollutants (TSP, SO_2, NO_x, HC, and CO). Also, if the NEDS type-3 transaction is an add transaction, an EIS/PS type-4 transaction containing a pollutant ID of zero is created for the purpose of entering ash and sulfur contents for the SCC. See Section 4.2.5 for a further discussion of this special EIS/PS type-4 transaction.

One to three NEDS transactions can be present for a given SCC number depending on the action code. Any duplicate NEDS transactions (i.e., transactions containing identical SCC/card-type combinations) will be rejected by the program. A NEDS type-1 transaction is the only NEDS transaction that can contain a delete action code (a code of 'D'). NEDS type-2 and type-3 transactions containing an action code of 'D' will be rejected by the program.

When NEDS add transactions are being processed, the program requires that a NEDS type-3 transaction be present. If NEDS type-1 and/or type-2 add transactions are not present for an SCC number, the program will generate corresponding EIS/PS transaction types 1, 2, and 3; however, the data fields for the generated transactions will contain messages indicating that they were created by PCVNEEF (EP0020). If a NEDS type-3 add transaction is not present, the program will reject all other associated NEDS transactions and issue an error message.

Any combination of the three types of NEDS transactions is valid for change transactions. Corresponding EIS/PS transactions are generated from the NEDS change transactions, provided that all the data fields of the NEDS transactions are not blank.

4.2.3.2 File Formats

Input to the program consists of NEDS emission factor file transactions and an option card. See Figure 4.2.3-a for a description of the NEDS transaction formats. See Section 4.2.3.3 for a discussion of the option card.

Output from the program consists of EIS/PS emission factor file transactions; a diagnostic report containing input and output transaction counts, error counts, and a listing of errors encountered; and optionally, a listing of the input NEDS transactions and the associated output EIS/PS transactions. See Figure 4.2.5-c for a description of the EIS/PS emission factor file transaction formats. See Figure 4.2.3-b for a sample diagnostic report and Figure 4.2.3-c for a sample transaction listing.

4.2.3.3 Options and Control Cards

An option card must be submitted with each run of PCVNEEF (EP0020). The option card contains a list option and an option date. When 'LIST' is coded in columns 1 through 4 of the option card, a listing of the input NEDS transactions and the associated EIS/PS transactions will be printed. Leaving this field blank will cause the transaction listing to be suppressed.

An option date must appear in columns 21 through 25 of the option card in the Julian form YYDDD, where YY is the year and DDD is the day of the year. If the date is not present on the option card, program execution will be terminated. The option date is inserted in the output EIS/PS transactions and therefore, should be the current date. See Figure 4.2.3-d for a description of the option card.

4.2.3.4 Error Messages

PCVNEEF 001 ERROR - COLUMN 01 - INVALID SCC NUMBER - RECORD REJECTED

Meaning: The SCC number of the NEDS transaction is not numeric, or it is all nines. The transaction was rejected.

Action: Correct the SCC number and resubmit the job.

PCVNEEF 002 ERROR - COLUMN 80 - INVALID RECORD TYPE - RECORD REJECTED

Meaning: The card type of the NEDS transaction is not '1', '2', or '3'. The transaction was rejected.

Action: Correct the error and resubmit the job.

PCVNEEF 003 ERROR - COLUMN 10 - INVALID ACTION CODE - RECORD REJECTED

Meaning: The action code of the NEDS transaction is not 'A', 'C', or 'D'. The transaction was rejected.

Action: Correct the error and resubmit the job.

PCVNEEF 004 ERROR - ADDITIONAL RECORD FOR RECORD TYPE X OF SCC NUMBER NNNNNNNN - RECORD REJECTED

Meaning: The NEDS transaction contains a duplicate SCC/card-type combination, where 'NNNNNNNN' is the SCC number and 'X' is the card type. The transaction was rejected.

Action: Correct the error and resubmit the job if necessary.

PCVNEEF 005 ERROR - NO VALID RECORD TYPE 3 FOR SCC NNNNNNNN TO BE ADDED - NO OUTPUT FOR THIS SCC

Meaning: No valid NEDS type-3 transaction is present for the specified SCC; therefore, no output EIS/PS transactions were generated for this SCC.

Action: Supply a valid NEDS type-3 transaction and resubmit the job.

PCVNEEF 006 ERROR - COLUMN XX - INVALID FORMAT FOR EMISSION FACTOR FIELD N - POLLUTANT DATA REJECTED

Meaning: The Nth emission factor field beginning in column 'XX' of the NEDS type-3 transaction is not numeric, or the decimal point is not in the proper position. The data was rejected.

Action: Correct the error and resubmit the job.

PCVNEEF 007 ERROR - COLUMN XX - INVALID VALUE FOR FLAG FIELD N - POLLUTANT DATA REJECTED

Meaning: The Nth flag field beginning in column 'XX' of the NEDS type-3 transaction is not valid. Valid values for the second character position of this field are '0' through '9'. If N is 1, the third character position must be 'A' or blank. If N is 2, the third character position must be 'S' or blank. The data was rejected.

Action: Correct the error and resubmit the job.

PCVNEEF 008 ERROR - NO USABLE POLLUTANT FIELD IN RECORD - NO OUTPUT CREATED FOR THIS SCC

Meaning: No pollutant data is present on the NEDS type-3 add transaction, or the data was rejected. No EIS/PS add transactions were generated for this SCC.

Action: Supply valid data and resubmit the job.

PCVNEEF 009 WARNING - SCC NNNNNNNN TO BE ADDED, BUT NO RECORD 1 FOUND - OUTPUT FIELDS GENERATED

Meaning: A NEDS type-3 add transaction is present but there is no type-1 add transaction for the specified SCC.
Corresponding output EIS/PS add transactions were generated.

Action: Supply a NEDS type-1 add transaction for the specified SCC number and resubmit the job if necessary.

PCVNEEF 010 WARNING - SCC NNNNNNNN TO BE ADDED, BUT NO RECORD 2 FOUND - OUTPUT FIELDS GENERATED

Meaning: A NEDS type-3 add transaction is present but there is no type-2 add transaction for the specified SCC.
Corresponding output EIS/PS add transactions were generated.

Action: Supply a NEDS type-2 add transaction for the specified SCC number and resubmit the job if necessary.

PCVNEEF 011 ERROR - RECORDS OF SCC NNNNNNNN HAVE INCONSISTENT ACTION CODES - NO OUTPUT FOR THIS SCC

Meaning: NEDS transactions for SCC 'NNNNNNNN' do not contain the same action code. No EIS/PS transactions were generated.

Action: Correct the error and resubmit the job.

PCVNEEF 012 ABORT - NO CONTROL CARD PRESENT OR DATE FIELD NON-NUMERIC

Meaning: An option card was not submitted with the run, or the control date on the option card is not numeric.

Action: Supply an option card with a valid control date and resubmit the job.

PCVNEEF 013 ABORT - NO NEDS DATA PRESENT OR DATA SORT HEADER RECORD MISSING

Meaning: There are no NEDS transactions present, or the header record created by PSRNEEF (EP0010) is not present.

Action: Supply sorted NEDS transactions with the appropriate header record and resubmit the job.

PCVNEEF 014 ERROR - DELETE TRANSACTION SHOULD ONLY BE RECORD TYPE 1 - RECORD REJECTED

Meaning: The NEDS delete transaction is not a type-1 transaction. The transaction was rejected.

Action: Correct the error and resubmit the job.

PCVNEEF 015 ERROR - NO USABLE POLLUTANT FIELDS IN RECORD - RECORD REJECTED

Meaning: The NEDS type-3 change transaction contains no pollutant data, or the data is invalid. The transaction was rejected. Do not confuse this error message with error message 8, which is for add transactions.

Action: Correct any errors and resubmit the job.

4.2.3.5 Cataloged JCL

4.2.3.5.1 JCL listing - PCVNEEF (EP0020) can be executed by the cataloged procedure EPCVE10. This procedure also executes the NEDS emission factor file transaction sort program, PSRNEEF (EP0010), prior to executing PCVNEEF (EP0020). See Figure 4.2.3-e for a listing of EPCVE10.

4.2.3.5.2 Cross-reference of DD names and files -

Program Name: PSRNEEF (EP0010)

DD Name	File Description	Input/Output
EPSINPT	Unsorted NEDS emission factor file transactions	Input
EPSOUTP	Sorted NEDS emission factor file transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PCVNEEF (EP0020)

DD Name	File Description	Input/Output
EPSINPT	NEDS emission factor file transactions	Input
EPSOPTN	Option card	Input
EPSOUTP	EIS/PS emission factor file transactions	Output
EPSDIAG	Diagnostic report	Output
EPSTRNL	Transaction listing	Output

4.2.3.5.3 User-supplied JCL - To execute the cataloged procedure EPCVE10, the user must supply the NEDS emission factor file transactions, the data set name of the EIS/PS emission factor file transactions, and an option card. See Figure 4.2.3-f for a description of the procedure's substitutable parameters.

4.2.3.5.4 Sample run stream -The following run stream would sort the NEDS emission factor file transactions and convert them to EIS/PS emission factor file transactions. The input NEDS transactions are punched cards and the data set name of the output EIS/PS transaction file is its default value.

```
// EXEC EPCVE10
//SORT.INPUT DD *
NEDS emission factor file transactions
//CONVERT.OPTIONS DD *
LIST              80045
/*
```

4.2.3.6 Warnings and Special Instructions

The NEDS emission factor file transactions must be sorted into the proper sequence before being input to PCVNEEF (EP0020). See Section 4.2.2 for a discussion of the NEDS emission factor file transaction sort program, PSRNEEF (EP0010).

4.2.3.7 Cost Considerations

To reduce the cost of executing PCVNEEF (EP0020), the user can suppress the listing of input and output transactions. This is accomplished by leaving blank the list option field of the option card.

The estimates listed below are based on the execution of the run stream in Section 4.2.3.5.4 on an IBM 370/168.

NEDS emission factor file transactions:	328 records
EIS/PS emission factor file transactions:	867 records
Number of errors detected:	13 errors
CPU time:	1.66 seconds
I/O time:	22.44 seconds
Total time:	24.10 seconds
Estimated cost:	$3.37

4.2.3.8 Related Programs and Procedures

PCVNEEF (EP0020) can be executed by the cataloged procedure EPEME20. This procedure executes PSRNEEF (EP0010); PCVNEEF (EP0020); PSREFTR (EP0030), the EIS/PS emission factor file transaction sort program; and PEMEFAC (EP0040), the emission factor file edit-maintenance program.

Header Record

Column #	Field Length	Data Type	Description
1 - 8	8	Numeric	Zeroes
9 - 80	72		Not Used

(Page 1 of 4)

Figure 4.2.3-a. NEDS Emission Factor File Transaction Formats

Card 1

Column #	Field Length	Data Type	Description
1 - 8	8	Numeric	SCC Number
9	1		Not Used
10	1	Alphabetic	Action Code
11 - 27	17	Alphanumeric	SCC Description 1
28 - 44	17	Alphanumeric	SCC Description 2
45 - 61	17	Alphanumeric	SCC Description 3
62 - 78	17	Alphanumeric	SCC Description 4
79	1		Not Used
80	1	Numeric	Card Type

(Page 2 of 4)

Figure 4.2.3-a - continued. NEDS Emission Factor File Transaction Formats

Card 2

Column #	Field Length	Data Type	Description
1 - 8	8	Numeric	SCC Number
9	1		Not Used
10	1	Alphabetic	Action Code
11 - 45	35	Alphanumeric	Units Description 1
46 - 79	34	Alphanumeric	Units Description 2
80	1	Numeric	Card Type

(Page 3 of 4)

Figure 4.2.3-a - continued. NEDS Emission Factor File Transaction Formats

Card 3

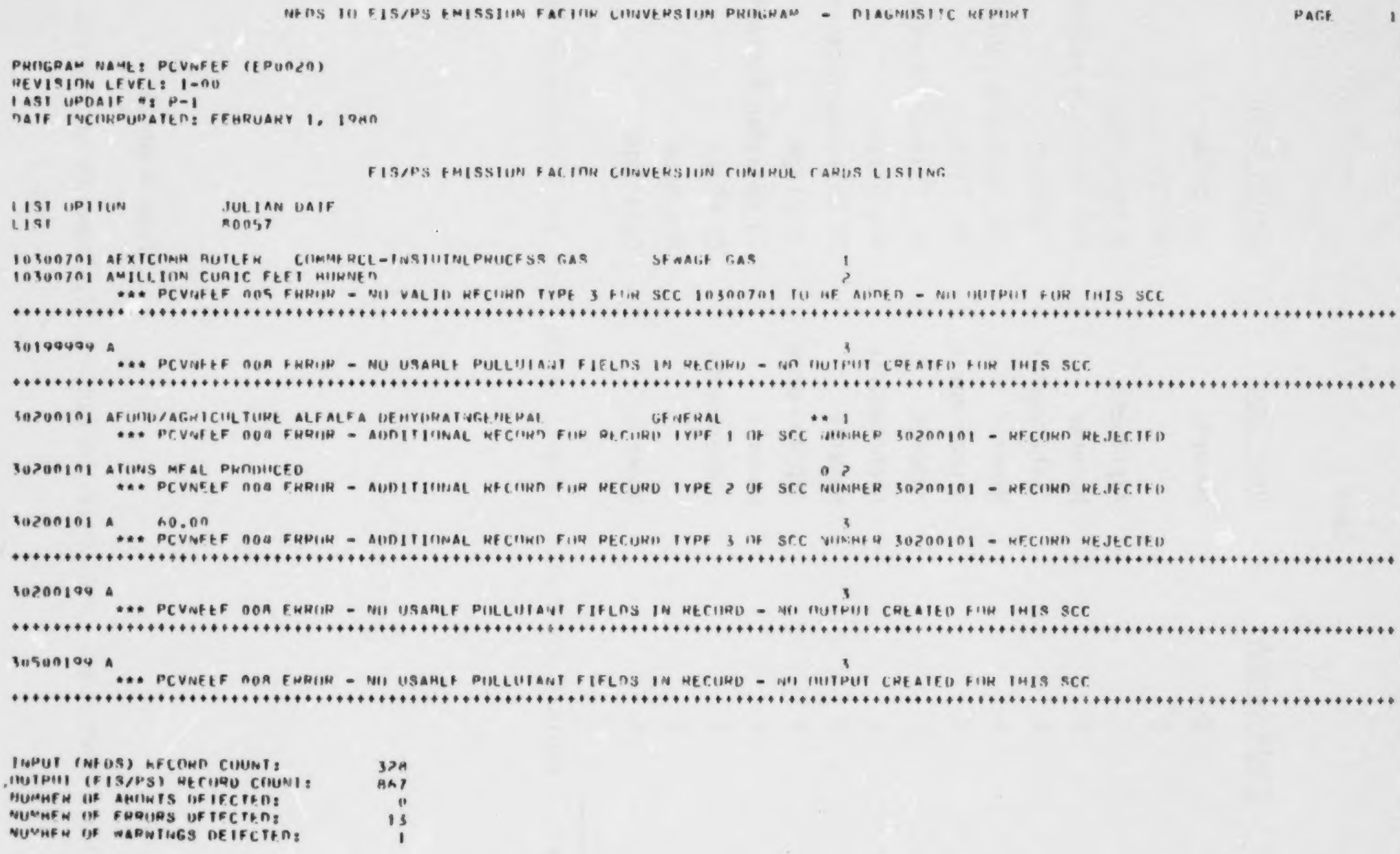
Columns	Field Length	Data Type	Description
1 - 8	8	Numeric	SCC Number
9	1		Not Used
10	1	Alphabetic	Action Code
11 - 19	9	Numeric	TSP Emission Factor*
20 - 23	4	Alphanumeric	TSP Flags
24 - 32	9	Numeric	SO_2 Emission Factor*
33 - 36	4	Alphanumeric	SO_2 Flags
37 - 45	9	Numeric	NO_x Emission Factor*
46 - 49	4	Alphanumeric	NO_x Flags
50 - 58	9	Numeric	HC Emission Factor*
59 - 62	4	Alphanumeric	HC Flags
63 - 71	9	Numeric	CO Emission Factor*
72 - 75	4	Alphanumeric	CO Flags
76 - 79	4		Not Used
80	1	Numeric	Card Type

---

*Format includes a decimal point with 6 digits to the left and 2 digits to the right.

(Page 4 of 4)

Figure 4.2.3-a - continued. NEDS Emission Factor File Transaction Formats



```
                    NEDS TO EIS/PS EMISSION FACTOR CONVERSION PROGRAM  -  DIAGNOSTIC REPORT                           PAGE     1

PROGRAM NAME: PCVNEEF (EP0020)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

                                   EIS/PS EMISSION FACTOR CONVERSION CONTROL CARDS LISTING

LIST OPTION          JULIAN DATE
LIST                 80057

10300701 AEXTCOMB BOILER   COMMERCL-INSTUTNLPROCESS GAS       SEWAGE GAS          1
10300701 AMILLION CUBIC FEET BURNED                                               2
         *** PCVNEEF 005 ERROR - NO VALID RECORD TYPE 3 FOR SCC 10300701 TO BE ADDED - NO OUTPUT FOR THIS SCC
*********** ****************************************************************************************************

30199999 A                                                                        3
         *** PCVNEEF 008 ERROR - NO USABLE POLLUTANT FIELDS IN RECORD - NO OUTPUT CREATED FOR THIS SCC
****************************************************************************************************************

30200101 AFOOD/AGRICULTURE ALFALFA DEHYDRATNGGENERAL           GENERAL         ** 1
         *** PCVNEEF 004 ERROR - ADDITIONAL RECORD FOR RECORD TYPE 1 OF SCC NUMBER 30200101 - RECORD REJECTED

30200101 ATONS MEAL PRODUCED                                                   0 2
         *** PCVNEEF 004 ERROR - ADDITIONAL RECORD FOR RECORD TYPE 2 OF SCC NUMBER 30200101 - RECORD REJECTED

30200101 A    60.00                                                               3
         *** PCVNEEF 004 ERROR - ADDITIONAL RECORD FOR RECORD TYPE 3 OF SCC NUMBER 30200101 - RECORD REJECTED
****************************************************************************************************************

30200199 A                                                                        3
         *** PCVNEEF 008 ERROR - NO USABLE POLLUTANT FIELDS IN RECORD - NO OUTPUT CREATED FOR THIS SCC
****************************************************************************************************************

30500199 A                                                                        3
         *** PCVNEEF 008 ERROR - NO USABLE POLLUTANT FIELDS IN RECORD - NO OUTPUT CREATED FOR THIS SCC
****************************************************************************************************************


INPUT (NEDS) RECORD COUNT:          328
OUTPUT (EIS/PS) RECORD COUNT:       867
NUMBER OF ABORTS DETECTED:            0
NUMBER OF ERRORS DETECTED:           13
NUMBER OF WARNINGS DETECTED:          1
```

Figure 4.2.3-b. Diagnostic Report

```
                                        EMISSION FACTOR TRANSACTIONS LISTING                                            PAGE    1

INPUT (NEDS) EMISSION FACTOR TRANSACTIONS
                                                  OUTPUT (EIS/PS) EMISSION FACTOR TRANSACTIONS


10100101 AEXTCOMB BOILER   ELECTRIC GENERATNANTHRACITE COAL  PULVERIZED COAL   1
10100101 ATONS BURNED                                                         0 2
10100101 A000017.00  A 000038.00  S 000018.00    000000.00    000001.00         3

                                                  1A10100101       80057EXTCOMB BOILER   ELECTRIC GENERATNANTHRACITE COAL
                                                  2A10100101       80057PULVERIZED COAL  TONS BURNED
                                                  3A10100101       80057                                   0
                                                  4A10100101F 0000080057
                                                  4A10100101F 1110180057PARTICULATE FACTOR    A   000017000
                                                  4A10100101F 4240180057SO2 FACTOR             S  000038000
                                                  4A10100101F 4260280057NOX FACTOR                000018000
                                                  4A10100101F 4310180057HC FACTOR                 000000000
                                                  4A10100101F 4210180057CO FACTOR                 000001000
*************************************************************************************************************************

10100105 AEXTCOMB BOILER   ELECTRIC GENERATNANTHRACITE COAL  <10MMBTU PULVIZ** 1
10100105 ATONS BURNED                                                         0 2
10100105 A000017.00  A 000038.00  S 000018.00    000000.03    000001.00         3

                                                  1A10100105       80057EXTCOMB BOILER   ELECTRIC GENERATNANTHRACITE COAL
                                                  2A10100105       80057<10MMBTU PULVIZ**TONS BURNED
                                                  3A10100105       80057                                   0
                                                  4A10100105F 0000080057
                                                  4A10100105F 1110180057PARTICULATE FACTOR    A   000017000
                                                  4A10100105F 4240180057SO2 FACTOR             S  000038000
                                                  4A10100105F 4260280057NOX FACTOR                000018000
                                                  4A10100105F 4310180057HC FACTOR                 000000030
                                                  4A10100105F 4210180057CO FACTOR                 000001000
*************************************************************************************************************************

10100106 AEXTCOMB BOILER   ELECTRIC GENERATNANTHRACITE COAL  <10MMBTU STOKER** 1
10100106 ATONS BURNED                                                         0 2
10100106 A000002.00  A 000038.00  S 000006.00    000000.20    000010.00         3

                                                  1A10100106       80057EXTCOMB BOILER   ELECTRIC GENERATNANTHRACITE COAL
                                                  2A10100106       80057<10MMBTU STOKER**TONS BURNED
                                                  3A10100106       80057                                   0
                                                  4A10100106F 0000080057
                                                  4A10100106F 1110180057PARTICULATE FACTOR    A   000002000
                                                  4A10100106F 4240180057SO2 FACTOR             S  000038000
                                                  4A10100106F 4260280057NOX FACTOR                000006000
                                                  4A10100106F 4310180057HC FACTOR                 000000200
                                                  4A10100106F 4210180057CO FACTOR                 000010000
*************************************************************************************************************************
```

Figure 4.2.3-c. Transaction Listing

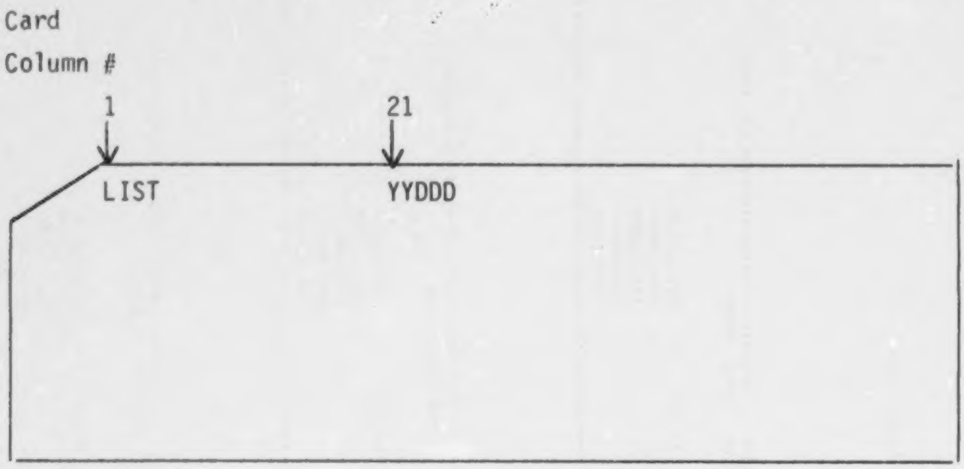


Figure 4.2.3-d. Option Card Format

```
//* EPALMH/A087 PEDGEPETH, LLOYD M. (919) 541-5491
//*
//*    PROCEDURE NAME: EPCVE10
//*    REVISION LEVEL: 1-00
//*    LAST UPDATE #: P-1
//*    DATE INCORPORATED: FEBRUARY 1, 1980
//*
//*    THIS PROCEDURE ALLOWS THE USER TO CONVERT NEDS EMISSION FACTOR
//*    FILE TRANSACTIONS INTO EIS/PS EMISSION FACTOR FILE TRANSACTIONS
//*
//*
//EPCVE10 PROC  PROJECT='CH.EPALMH.A087.CDHS.HU.PHI',
//              PROG1=PSRNEEF,
//              PROG2=PCVNEEF,
//              REGION1=150K,
//              REGION2=100K,
//              TIME1='1,0',
//              TIME2='1,0',
//              TRANFIL=EPTRNFIL,
//              UNIT=3330,
//              SERIAL=CDHSPK,
//              DISP='NEW,CATLG,DELETE',
//              SPCUNIT=TRK,
//              PRIMARY=20,
//              SECNDRY=10,
//              TEMP=SYSDA,
//              WORKSPC='20,10',
//              OUT=A
//*
//SORT    EXEC  PGM=&PROG1,
//              REGION=&REGION1,
//              TIME=(&TIME1)
//*
//* SORT NEDS EMISSION FACTOR FILE TRANSACTIONS INTO FILE SEQUENCE
//*
//STEPLIB   DD DSNAME=&PROJECT..LOAD,
//              VOLUME=(PRIVATE,RETAIN),
//              DISP=(SHR,PASS)
//SORTLIB   DD DSNAME=SYS1.SORTLIB,
//              DISP=(SHR,PASS)
//*
//SORTWK01  DD UNIT=&TEMP,
//              SPACE=(TRK,(&WORKSPC),,CONTIG)
//*
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),
//              SPACE=(TRK,(&WORKSPC),,CONTIG)
//*
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),
//              SPACE=(TRK,(&WORKSPC),,CONTIG)
//*
//* INPUT DATA SET - NEDS EMISSION FACTOR FILE TRANSACTIONS
//*
//EPSINPT   DD DDNAME=INPUT,
//              DCB=BLKSIZE=80
//*
//* OUTPUT DATA SET - SORTED NEDS EMISSION FACTOR FILE TRANSACTIONS
```

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Figure 4.2.3-e. Cataloged Procedure EPCVE10

```
//*                                                                   00005700
//EPSOUTP   DD DSNAME=&&SORTED,                                       00005800
//             UNIT=&TEMP,                                            00005900
//             DISP=(NEW,PASS,DELETE),                                00006000
//             SPACE=(TRK,(&WORKSPC),RLSE)                            00006100
//*                                                                   00006200
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                00006300
//*                                                                   00006400
//EPSDIAG   DD SYSOUT=&OUT                                            00006500
//*                                                                   00006600
//* OUTPUT DATA SETS - SYSTEM OPERATION                               00006700
//*                                                                   00006800
//SYSPRINT  DD SYSOUT=&OUT                                            00006900
//*                                                                   00007000
//SYSOUT    DD SYSOUT=&OUT                                            00007100
//*                                                                   00007200
//SYSDBOUT  DD SYSOUT=&OUT                                            00007300
//*                                                                   00007400
//SYSDTERM  DD SYSOUT=&OUT                                            00007500
//*                                                                   00007600
//SYSUDUMP  DD SYSOUT=&OUT                                            00007700
//*                                                                   00007800
//*                                                                   00007900
//*                                                                   00008000
//CONVERT EXEC PGM=&PROG2,                                            00008100
//             REGION=&REGION2,                                       00008200
//             TIME=(&TIME2)                                          00008300
//*                                                                   00008400
//* CONVERT NEDS EMISSION FACTOR FILE TRANSACTIONS TO EIS/PS EMISSION 00008500
//* FACTOR FILE TRANSACTIONS                                          00008600
//*                                                                   00008700
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                 00008800
//             VOLUME=(PRIVATE,RETAIN),                               00008900
//             DISP=(SHR,PASS)                                        00009000
//*                                                                   00009100
//* INPUT DATA SET - OPTION CARD                                      00009200
//*                                                                   00009300
//EPSOPIN   DD DDNAME=OPTIONS,                                        00009400
//             DCB=BLKSIZE=80                                         00009500
//*                                                                   00009600
//* INPUT DATA SET - SORTED NEDS EMISSION FACTOR FILE TRANSACTIONS    00009700
//*                                                                   00009800
//EPSINPT   DD DSNAME=&&SORTED,                                       00009900
//             DISP=(SHR,PASS)                                        00010000
//*                                                                   00010100
//* OUTPUT DATA SET - EIS/PS EMISSION FACTOR FILE TRANSACTIONS        00010200
//*                                                                   00010300
//EPSOUTP   DD DSNAME=&PROJECT..DATA.&TRANFIL,                        00010400
//             VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                   00010500
//             DISP=(&DISP),                                          00010600
//             UNIT=&UNIT,                                            00010700
//             SPACE=(&SPCUNIT,(&PRIMARY,&SECONDRY),RLSE)             00010800
//*                                                                   00010900
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                00011000
//*                                                                   00011100
//EPSDIAG   DD SYSOUT=&OUT                                            00011200
```

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Figure 4.2.3-e - continued. Cataloged Procedure EPCVE10

```
//*                                                                 00011300
//* OUTPUT DATA SET - EMISSION FACTOR TRANSACTIONS LISTING          00011400
//*                                                                 00011500
//EFSTRNL   DD SYSOUT=&OUT                                          00011600
//*                                                                 00011700
//* OUTPUT DATA SETS - SYSTEM OPERATION                             00011800
//*                                                                 00011900
//SYSPRINT  DD SYSOUT=&OUT                                          00012000
//*                                                                 00012100
//SYSOUT    DD SYSOUT=&OUT                                          00012200
//*                                                                 00012300
//SYSDBOUT  DD SYSOUT=&OUT                                          00012400
//*                                                                 00012500
//SYSDTERM  DD SYSOUT=&OUT                                          00012600
//*                                                                 00012700
//SYSUDUMP  DD SYSOUT=&OUT                                          00012800
//*                                                                 00012900
//*                                                                 00013000
```

(Paye 3 of 3)

Figure 4.2.3-e - continued. Cataloged Procedure EPCVE10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA. EPTRNFIL would be the full data set name of the output EIS/PS emission factor file transaction file)
PROG1	PSRNEEF	NEDS emission factor file transaction sort program
PROG2	PCVNEEF	NEDS to EIS/PS emission factor file transaction conversion program
REGION1	150K	Region size allocated for execution of PSRNEEF
REGION2	100K	Region size allocated for execution of PCVNEEF
TIME1	'1,0'	Time (minutes, seconds) allocated for execution of PSRNEEF
TIME2	'1,0'	Time (minutes, seconds) allocated for execution of PCVNEEF
TRANFIL	EPTRNFIL	Lowest-level index of the output EIS/PS emission factor file transaction file
UNIT	3330	Unit type to which the output EIS/PS emission factor transaction file is to be written
SERIAL	CDHSPK	Volume serial number of the volume to which the output EIS/PS emission factor file transaction file is to be written

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Figure 4.2.3-f. Substitutable Parameters for EPCVE10

Parameter Name	Default Value	Description
DISP	'NEW,CATLG,DELETE'	Disposition of the output EIS/PS emission factor file transaction file
SPCUNIT	TRK	Units in which space for the output EIS/PS emission factor file transaction file is to be allocated
PRIMARY	20	Primary space allocation for the output EIS/PS emission factor file transaction file
SECNDRY	10	Secondary space allocation for the output EIS/PS emission factor file transaction file
TEMP	SYSDA	Unit type for temporary sort space
WORKSPC	'20,10'	Number of units of space to be allocated for the temporary sort space
OUT	A	SYSOUT class for all print files

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Figure 4.2.3-f - continued. Substitutable Parameters for EPCVE10

4.2.4 EMISSION FACTOR FILE TRANSACTION SORT PROGRAM - PSREFTR (EP0030)

4.2.4.1 Description

PSREFTR (EP0030) sorts emission factor file transactions into the sequence required by the emission factor file edit-maintenance program, PEMEFAC (EP0040); Figure 4.2.4-a details this sort order. All emission factor file transactions must be sorted by PSREFTR (EP0030) before they can be used to update (or create) the emission factor file . See Section 4.2.5 for additional information on the emission factor file transactions.

4.2.4.2 File Formats

Input to this program consists solely of emission factor file transactions, either coded by the user or generated by the NEDS to EIS/PS emission factor file transaction conversion program PCVNEEF (EP0020). Refer to Figure 4.2.5.2-c for a description of the emission factor file transaction format.

PSREFTR (EP0030) produces two output files: a diagnostic report and a temporary file containing the sorted emission factor file transactions. The sorted transactions are in the same sequence as the emission factor file and can be used as input to the emission factor file edit-maintenance program, PEMEFAC (EP0040). An example of the diagnostic report is shown in Figure 4.2.4-b.

4.2.4.3. Options and Control Cards

There are no options.

4.2.4.4 Error Messages

PSREFTR 001 ERROR - INVALID ACTION CODE, TRANSACTION REJECTED
Meaning: Valid action codes are A (add), D (delete) and C (change).
Action: Correct the error and resubmit the transaction.

PSREFTR 002 ERROR - INVALID EF ORIGIN, TRANSACTION REJECTED
Meaning: Valid codes are F (federal), S (state), and L (local).
Action: Correct the error and resubmit the transaction.

PSREFTR 030 WARNING - EF ORIGIN OR EF SOURCE NOT BLANK, REPLACING SPACE
Meaning: The two fields should be blank in the 1, 2 and 3 cards.
Action: No action is needed.

4.2.4.5 Cataloged JCL

PSREFTR (EP0030) should always be executed in conjunction with the emission factor file edit-maintenance program PEMEFAC (EP0040). See Section 4.2.5.5 for a discussion of the cataloged procedure EPEME10, which executes both programs.

4.2.4.6 Warnings and Special Instructions

Note that the COBOL sort verb is used in this program; therefore, the collating sequence for alphanumeric fields is determined by the computer at the user's particular installation.

In addition to the diagnostic report produced by PSREFTR (EP0030), messages generated by the sort-merge package will be printed. The format and content, as well as the physical location, of these messages depend upon the user's particular installation.

4.2.4.7 Cost Considerations

The following estimates are for the execution of PSREFTR (EP0030) on an IBM 370/168:

Number of emission factor file transactions:	867 records
CPU time:	2.16 seconds
I/O time:	24.01 seconds
Total time:	26.17 seconds
Estimated cost:	$3.66

4.2.4.8 Related Programs and Procedures

PSREFTR (EP0030) should always be executed in conjunction with the emission factor file edit-maintenance program, PEMEFAC (EP0040). The cataloged procedure EPEME10 executes both programs.

The cataloged procedure EPEME20 can be executed to sort NEDS emission factor file transactions, convert these transactions to EIS/PS emission factor file transactions, re-sort, and update (or create) the emission factor file with these transactions. Thus, PSREFTR (EP0030) and PEMEFAC (EP0040) would be executed with PSRNEEF (EP0010), the NEDS emission factor file transaction sort program, and PCVNEEF (EP0020), the NEDS to EIS/PS emission factor file transaction conversion program. See Section 4.4.2 for a complete description of this procedure.

Record Position	Description	Sort Sequence
3 - 10	SCC	Ascending
11	Emission Factor Origin	Ascending
12	Emission Factor Source Type	Ascending
13 - 17	Pollutant ID	Ascending
1	Card Type	Ascending
2	Action Code	Ascending
18 - 22	SCC Date	Ascending

Figure 4.2.4-a. Sort Sequence for EIS/PS Emission Factor File Transactions

```
                         EIS/PS EMISSION FACTOR FILE TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE    1

PROGRAM NAME: PSREFTR (EP0030)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF TRANSACTIONS READ:                                  867
NUMBER OF TRANSACTIONS WRITTEN:                               868
NUMBER OF ERRORS DETECTED:                                      0
NUMBER OF TRANSACTIONS REJECTED:                                0
```

Figure 4.2.4-b. Diagnostic Report

4.2.5 EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM - PEMEFAC (EP0040)

4.2.5.1 Description

The emission factor file edit-maintenance program creates and updates the EIS/PS emission factor file and the EIS/PS emission factor description file using four types of transactions. Both files are processed simultaneously, since the emission factor description file must contain one record for each SCC that occurs in the emission factor file. The program edits the transactions prior to updating these files, and any errors detected in a transaction will cause it to be rejected by the program.

Transaction types 1, 2, and 3 are used for updating the emission factor description file, and type-4 transactions are used for updating the emission factor file. Therefore, the following transactions are required to add a new SCC to the files: one type-1 transaction, one type-2 transaction, one type-3 transaction, and one or more type-4 transactions. A maximum of 17 type-4 (pollutant) transactions is allowed by the program, the first of which must contain a zero pollutant ID. The type-4 transaction containing the zero pollutant ID allows the user to enter the ash and sulfur contents for the specified SCC. This transaction is automatically generated by PCVNEEF (EP0020) when converting NEDS transactions to EIS/PS emission factor file transactions; however, the user is required to enter the values for ash and sulfur contents since the NEDS transactions do not contain this information. Whether generated by PCVNEEF (EP0020) or supplied by the user, this type-4 transaction must be present to add a new SCC to the files.

Changing data in existing emission factor description file records requires a type-1, type-2, or type-3 transaction, depending on the data being changed. Also, any combination of the three can be used to change data in a record. Any data field can be changed, except the key field (the SCC number). However, the control date field is changed by PEMEFAC (EP0040) only if the iate of the transaction is greater than the control date of the emission factor description file record.

Changing data in an existing emission factor file record requires a type-4 transaction. Any data can be changed, except the key fields (the SCC number, the origin, the source type, the pollutant ID, and the record date). However, the control date field of the record (not to be confused with the record date field, which contains the record's creation date) is changed by PEMEFAC (EP0040) only if the transaction date is greater than the control date.

Data fields in the emission factor description file records or the emission factor file records will not be changed if the corresponding data fields on the change transactions are blank.

Deleting an SCC from the emission factor description file and the emission factor file requires a type-1 delete transaction. This will cause the description record and all pollutant records associated with the specified SCC to be deleted from their respective files. Type-2 and type-3 delete transactions are invalid and will be rejected by the program.

Deleting a single pollutant record from the emission factor file requires a type-4 delete transaction. However, a type-4 delete transaction containing a zero pollutant ID is invalid and will be rejected by the program. The only way to delete an emission factor file record that contains a pollutant ID of zero is to delete the entire SCC by submitting a type-1 delete transaction for that SCC.

When these files are updated, the header record control date for each file is updated using the date specified by the user on the option card. These header records also contain the date of the previous update run as well as a generation number which begins at 1 and is incremented by 1 during each update run. Therefore, the user can determine that the most recent files are being used.

4.2.5.2 File Formats

Input to PEMEFAC (EP0040) consists of an EIS/PS emission factor file, an EIS/PS emission factor description file, EIS/PS emission factor file transactions, and an option card. If PEMEFAC (EP0040) is being executed to create new files rather than update current ones, no input emission factor file or emission factor description file is used. See Figure 4.2.5-a for a description of the emission factor file record formats and Figure 4.2.5-b for a description of the EIS/PS emission factor description file record formats. See Figure 4.2.5-c for a description of the EIS/PS emission factor file transaction formats and Figure 4.2.5-d for the definitions of the transaction data fields. See Section 4.2.5.3 for a discussion of the option card.

Output from the program consists of the new or updated EIS/PS emission factor and emission factor description files; a diagnostic report containing error messages for any errors that were detected and record counts for all input and output files; and, optionally, listings of the input and output files as well as the transactions. See Figure 4.2.5-e for a sample diagnostic report, Figure 4.2.5-f for a sample listing of the input emission factor file, Figure 4.2.5-g for a sample listing of the input emission factor description file, Figure 4.2.5-h for a sample listing of the output emission factor file, Figure 4.2.5-i for a sample listing of the output emission factor description file, and Figure 4.2.5-j for a sample listing of the transaction file.

4.2.5.3 Options and Control Cards

An option card must be submitted with each run of PEMEFAC (EP0040) and must contain a control date supplied by the user. This date is coded in columns 1 through 5 and must be in the Julian form YYDDD. If the option card control date is not greater than the control dates in both file header records, program execution will be terminated.

Two other options available to the user are the warning-suppression option and the list option. The warning-suppression option controls the printing of warning messages. Coding 'FLAGW' in columns 7 through 11 will cause any warning messages that are generated to be printed in the diagnostic report. To suppress the listing of these warning messages, the field must be left blank. If the field is coded incorrectly, an error message will be printed and warning messages will be suppressed.

The list option allows the user to obtain listings of the transactions, the input emission factor and emission factor description files, and the output emission factor and emission factor description files. Coding 'LIST' in columns 13 through 16 will cause all five listings to be printed; leaving this field blank will cause all five listings to be suppressed. If the field is coded incorrectly, an error message will be generated and the listings will be suppressed.

A list of the options that are in effect is printed at the beginning of the diagnostic report. See Figure 4.2.5-k for a description of the option card format.

4.2.5.4 Error Messages

PEMEFAC 001 ABORT - NO DATE OPTION CARD

Meaning: No option card was submitted with the run. Program execution was terminated.

Action: Supply an option card with a valid date and resubmit the job.

PEMEFAC 002 ABORT - OPTION CARD DATE INVALID

Meaning: The date on the option card is nonnumeric, or the day is not between 1 and 366. Program execution was terminated.

Action: Correct the error and resubmit the job.

PEMEFAC 003 CONDITIONAL - FLAGW OPTION INVALID, USED DEFAULT OF NO FLAGW

Meaning: The warning option is not specified correctly on the option card.

Action: If the warning count in the diagnostic report is not zero and the user wishes to see the warnings, correct the error and resubmit the job.

PEMEFAC 004 CONDITIONAL - LIST OPTION INVALID, USED DEFAULT OF NO LIST

Meaning: The list option is not specified correctly on the option card.

Action: If listings are desired, correct the error and resubmit the job.

PEMEFAC 005 ABORT - INPUT SCC DESC FILE OUT OF SEQUENCE, SEE RECORDS ABOVE

Meaning: The input emission factor description file is not in the proper sequence. The two consecutive records causing this error are listed prior to the message in the order in which they were read. Program execution was terminated.

Action: Insure that the proper file is being used and resubmit the job. If the proper file was used, contact personnel at the National Air Data Branch for further assistance.

PEMEFAC 006 ABORT - INPUT SCC EMF FILE OUT OF SEQUENCE, SEE RECORDS ABOVE

Meaning: The input emission factor file is not in the proper sequence. The two consecutive records causing this error are listed prior to the message in the order in which they were read. Program execution was terminated.

Action: Insure that the proper file is being used and resubmit the job. If the proper file was used, contact personnel at the National Air Data Branch for further assistance.

PEMEFAC 007 ABORT - TRANSACTION FILE OUT OF SEQUENCE, SEE CARDS ABOVE

Meaning: The input transactions are not in the proper sequence for updating the files. The two consecutive transactions causing this error are listed prior to the message in the order in which they were read. Program execution was terminated.

Action: Verify that the transactions were sorted by PSREFTR (EP0030) prior to being input to PEMEFAC (EP0040). If the transactions were sorted, insure that the proper transactions were being input to PSREFTR (EP0030). If the proper transactions were used, contact personnel at the National Air Data Branch for further assistance.

PEMEFAC 008 ABORT - SCC DESC FILE DATE NOT LESS THAN OPTION CARD DATE

Meaning: The control date on the option card is not greater than the control date in the emission factor description file header record. Program execution was terminated.

Action: Change the control date on the option card and resubmit the job.

PEMEFAC 009 ABORT - SCC EMF FILE DATE NOT LESS THAN OPTION CARD DATE

Meaning: The control date on the option card is not greater than the control date in the emission factor file header record. Program execution was terminated.

Action: Change the control date on the option card and resubmit the job.

PEMEFAC 010 ERROR - NEW SCC DESC RECORD NOT COMPLETE, RECORD REJECTED

Meaning: A complete set of valid add transactions (types 1, 2, 3, and 4) was not present for the specified SCC. Those transactions that were present are listed prior to this message. No record was created for either the emission factor description file or the emission factor file.

Action: Supply the necessary transactions and resubmit the job.

PEMEFAC 011 ERROR - NEW SCC EMF RECORD NOT COMPLETE, RECORD REJECTED

Meaning: A complete set of valid add transactions (types 1, 2, 3, and 4) was not present for the specified SCC. Those transactions that were present are listed prior to this message. No record was created for either the emission factor file or the emission factor description file. Attempting to add an SCC to the files without a type-4 add transaction with a zero pollutant ID will also cause this message to be printed.

Action: Insure that no transactions associated with the specified SCC were rejected. Secondly, insure that a type-4 add transaction with a zero pollutant ID is present. Correct any errors and resubmit the job.

PEMEFAC 012 ERROR - SCC DESC FILE AND SCC EMF FILE DO NOT MATCH DATES AND GEN NUMBER

Meaning: The present control dates, previous control dates, and generation numbers from the file header records do not match. This indicates that the files were not created or updated in the same run. Note that using such files may cause further errors.

Action: If matching files were intended to be used, supply the appropriate data set names in the run stream and resubmit the job.

PEMEFAC 013 ERROR - COLUMN 18 - SCC DATE INVALID, CARD REJECTED

Meaning: Either the date is not numeric or the day is not between 1 and 366.

Action: Correct the error and resubmit the transaction.

PEMEFAC 014 ERROR - COLUMN 43 - FLAGS INVALID, CARD REJECTED

Meaning: The ash/sulfur flags are not ' ', ' S' or 'A '.

Action: Correct the error and resubmit the transaction.

PEMEFAC 015 WARNING - COLUMN 47 - UNIT OF MEASURE INVALID, CARD ACCEPTED

Meaning: The unit of measure is not alphabetic, numeric, or blank. The field is rejected, but the transaction is accepted.

Action: The user can correct the error and resubmit the job or supply the appropriate change transaction and submit a new job.

PEMEFAC 016 ERROR - COLUMN 49 - EMISSION FACTOR NOT NUMERIC, CARD REJECTED

Meaning: The emission factor is not numeric, or the emission factor (on a type-4 add transaction) is blank.

Action: Correct the error and resubmit the transaction.

PEMEFAC 017 ERROR - COLUMN 58 - ASH CONTENT NOT NUMERIC, CARD REJECTED

Meaning: The ash content field is neither numeric nor blank.

Action: Correct the error and resubmit the transaction.

PEMEFAC 018 ERROR - COLUMN 61 - SULFUR CONTENT NOT NUMERIC, CARD REJECTED

Meaning: The sulfur content field is neither numeric nor blank.

Action: Correct the error and resubmit the transaction.

PEMEFAC 019 ERROR - COLUMN 64 - CONTROL DEVICE EFFICIENCY NOT NUMERIC, CARD REJECTED

Meaning: The control device efficiency field is neither numeric nor blank.

Action: Correct the error and resubmit the transaction.

PEMEFAC 020 ERROR - COLUMN 13 - POLLUTANT ID FIELD REQUIRED ON TYPE 4, CARD REJECTED

Meaning: The pollutant ID field on a type-4 transaction is blank.

Action: Supply the appropriate pollutant ID and resubmit the transaction.

PEMEFAC 021 ERROR - COLUMN 1 - CARD TYPE INVALID, CARD REJECTED

Meaning: The card type is not '1', '2', '3', or '4'.

Action: Correct the error and resubmit the transaction.

PEMEFAC 022 ERROR - COLUMN 2 - ACTION CODE INVALID, CARD REJECTED

Meaning: The action code is not 'A', 'C', or 'D'; or, the action code is 'D' and the card type is '2' or '3'. Type-2 and type-3 delete transactions are not valid.

Action: Correct the error and resubmit the transaction.

PEMEFAC 023 ERROR - COLUMN 3 - SCC NUMBER NOT NUMERIC, CARD REJECTED

Meaning: The SCC number is not numeric.

Action: Correct the error and resubmit the transaction.

PEMEFAC 024 ERROR - COLUMN 13 - POLLUTANT ID INVALID, CARD REJECTED

Meaning: The pollutant ID field is blank or not numeric; or, the pollutant ID is zero for a type-4 delete transaction.

Action: If the pollutant ID field is blank or not numeric, correct the error and resubmit the transaction. Pollutant ID's are required on type-4 transactions; however, a type-4 delete transaction with a zero pollutant ID is not allowed. To delete an emission factor file record containing a zero pollutant ID, the user must delete the entire SCC from both files using a type-1 delete transaction.

EMEFAC 025 ERROR - ADD SPECIFIED FOR EXISTING SCC DESC RECORD, CARD REJECTED

Meaning: An add transaction was specified for an existing emission factor description file record.

Action: Insure that the proper key is coded on the transaction and that the appropriate files are being used. Resubmit the transaction or job as necessary.

PEMEFAC 026 ERROR - CHANGE SPECIFIED FOR NONEXISTENT SCC DESC RECORD, CARD REJECTED

Meaning: A change transaction was specified for an emission factor description file record that does not exist in the file.

Action: Insure that the proper key is coded on the transaction and that the appropriate files are being used. Resubmit the transaction or job as necessary.

PEMEFAC 027 ERROR - DELETE SPECIFIED FOR NONEXISTENT SCC DESC RECORD, CARD REJECTED

Meaning: A delete transaction was specified for an emission factor description file record that does not exist in the file.

Action: Insure that the proper key is coded on the transaction and that the appropriate files are being used. Resubmit the transaction or job as necessary.

PEMEFAC 028 ERROR - ADD SPECIFIED FOR EXISTING SCC EMF RECORD, CARD REJECTED

Meaning: A type-4 add transaction was specified for an existing emission factor file record.

Action: Insure that the proper key is coded on the transaction and that the appropriate files are being used. Resubmit the transaction or job as necessary.

PEMEFAC 029 ERROR - ADD SPECIFIED FOR SCC EMF BUT NO DESC EXISTS FOR SCC, CARD REJECTED

Meaning: A type-4 add transaction was specified for an SCC that does not exist in the emission factor description file.

Action: Insure that the proper key is coded on the transaction and that the appropriate files are being used. Resubmit the job, if necessary, supplying the associated type-1, type-2, and type-3 transactions.

PEMEFAC 030 WARNING - CHANGE SPECIFIED FOR NONEXISTENT SCC EMF RECORD, ACCEPTED AS ADD

Meaning: A type-4 change transaction was specified for an emission factor file record that does not exist in the file. The transaction was accepted as a type-4 add transaction. The pollutant ID will be added to the emission factor file only if the transaction is not rejected due to another error.

Action: Correct any errors that are evident and resubmit the job if necessary.

PEMEFAC 031 ERROR - DELETE SPECIFIED FOR NONEXISTENT SCC EMF RECORD, CARD REJECTED

Meaning: A type-4 delete transaction was specified for an emission factor file record that does not exist in the file.

Action: Insure that the proper key is coded on the transaction and that the appropriate files are being used. Resubmit the transaction or job as necessary.

PEMEFAC 032 ERROR - COLUMN 11 - EF ORIGIN INVALID, CARD REJECTED

Meaning: The emission factor origin on a type-4 transaction is not 'F', 'S', or 'L'; or, the emission factor origin on a type-1, type-2, or type-3 transaction is not blank.

Action: Correct the error and resubmit the transaction.

PEMEFAC 033 ABORT - NO HEADER RECORD FOR DESC FILE

Meaning: The emission factor description file contains no header record. Program execution was terminated since this record is necessary for control purposes.

Action: Insure that the proper file is being used and resubmit the job. If the proper file was used, contact personnel at the National Air Data Branch for further assistance.

PEMEFAC 034 ABORT - NO HEADER RECORD FOR SCC EMF FILE

Meaning: The emission factor file contains no header record. Program execution was terminated since this record is necessary for control purposes.

Action: Insure that the proper file is being used and resubmit the job. If the proper file was used, contact personnel at the National Air Data Branch for further assistance.

PEMEFAC 035 ERROR - MORE THAN 16 POLLUTANTS FOR THIS SCC/ORIGIN/SOURCE COMBINATION

Meaning: There are more than 16 pollutants, excluding the zero pollutant ID, present for the specified SCC/origin/source combination. The zero pollutant ID is not included in the 16 pollutants since it pertains to the SCC/origin/source combination and not to a specific pollutant.

Action: Insure that the appropriate files are being used. If the error occurred during an attempt to add a pollutant to the emission factor file, insure that the proper key is coded on the transaction. It may be necessary to delete some pollutants from the SCC/origin/source combination in order to add new pollutants. Resubmit the job if necessary.

PEMEFAC 036 ERROR - DUPLICATE TYPE 1 ADD TRANSACTION, CARDS REJECTED

Meaning: A type-1 add transaction contains a key that is identical to another type-1 add transaction. Both transactions were rejected.

Action: Insure that the proper keys are coded on each transaction. Correct any errors and resubmit the transactions or exclude the duplicate transaction.

PEMEFAC 037 ERROR - DUPLICATE TYPE 4 ADD TRANSACTION, CARD REJECTED

Meaning: A type-4 add transaction contains a key that is identical to another type-4 add transaction. Both transactions were rejected.

Action: Insure that the proper keys are coded on each transaction. Correct any errors and resubmit the transactions or exclude the duplicate transaction.

PEMEFAC 038 ABORT - NO HEADER RECORD FOR TRANSACTION FILE

Meaning: The transaction file contains no header record. This indicates that the transactions were not sorted by the emission factor transaction sort program, PSREFTR (EP0030), which generates the header record.

Action: Sort the transactions using PSREFTR (EP0030) and resubmit the job. If the error recurs, contact personnel at the National Air Data Branch for further assistance.

PEMEFAC 039 ERROR - COLUMN 12 - INVALID EF SOURCE TYPE, CARD REJECTED

Meaning: The emission factor origin field of the transaction contains 'F' or 'S', but the emission factor source type field is not blank. This message pertains only to type-4 transactions.

Action: Correct the error and resubmit the transaction.

PEMEFAC 040 ABORT - ERROR MESSAGE TABLE OVERFLOW, INCREASE TABLE SIZE

Meaning: A transaction has accumulated more error messages than the error message storage table will currently accommodate.

Action: Contact personnel at the National Air Data Branch for instructions on increasing the size of the error message storage table. Resubmit the transaction.

PEMEFAC 041 DISASTER - SUBSCRIPT FIELD (ERROR-CODE) IS ZERO, CALL NADB

Meaning: The subscript field named 'ERROR-CODE' contains zero. This indicates a program malfunction.

Action: Contact personnel at the National Air Data Branch for assistance.

PEMEFAC 042 ERROR - ZERO POLLUTANT RECORD MISSING, CARD REJECTED

Meaning: There is no emission factor file record containing a zero pollutant ID for the specified SCC/origin/source combination. This message pertains only to type-4 add transactions.

Action: Create a type-4 add transaction which contains a zero pollutant ID and the appropriate ash and sulfur contents for the specified SCC/origin/source combination. Resubmit the transaction.

4.2.5.5 Cataloged JCL - EPEME10

4.2.5.5.1 JCL listing - PEMEFAC (EP0040) can be run by executing the cataloged procedure EPEME10. This procedure also executes the emission factor file transaction sort program, PSREFTR (EP0030), prior to executing PEMEFAC (EP0040). See Figure 4.2.5-1 for a listing of EPEME10.

4.2.5.5.2 Cross-reference of DD names and files -

Program Name: PSREFTR (EP0030)

DD Name	File Description	Input/Output
EPSINPT	Unsorted emission factor file transactions	Input
EPSOUTP	Sorted emission factor file transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PEMEFAC (EP0040)

DD Name	File Description	Input/Output
EPSOPTN	Option card	Input
EPSTRAN	Emission factor file transactions	Input
EPSOLEF	Old EIS/PS emission factor file	Input
EPSOLDS	Old EIS/PS emission factor description file	Input
EPSNWEF	New or updated EIS/PS emission factor file	Output
EPSNWDS	New or updated EIS/PS emission factor description file	Output
EPSDIAG	Diagnostic report	Output
EPSTRNL	Transaction listing	Output
EPSOEFL	Old emission factor file listing	Output
EPSODSL	Old emission factor description file listing	Output
EPSNEFL	New or updated emission factor file listing	Output
EPSNDSL	New or updated emission factor description file listing	Output

4.2.5.5.3 User-supplied JCL - To execute the cataloged procedure EPEME10, the user must supply the emission factor file transactions and specify the data set names of the input and output emission factor files and the input and output emission factor description files. An option card for PEMEFAC (EP0040) must also be supplied. See Figure 4.2.5-m for a description of the procedure's substitutable parameters.

4.2.5.5.4 Sample run stream - The following run stream would sort the emission factor file transactions and update the EIS/PS emission factor and emission factor description files. The data set names of these files are their respective default values. The files and the transactions will be listed and any warning messages will be printed in the diagnostic report.

```
// EXEC EPEME10
//SORT.INPUT DD *
Unsorted emission factor file transactions
/*
//UPDATE.OPTIONS DD *
79339 FLAGW LIST
/*
```

4.2.5.6 Warnings and Special Instructions

Ash and sulfur contents are necessary only on type-4 transactions that contain a zero pollutant ID. Therefore, the ash and sulfur contents will appear only once for each SCC/origin/source combination in the emission factor file. There will be a maximum of 17 pollutant records for each SCC/origin/source combination: 1 zero pollutant record and 16 subordinate pollutant records.

The user must manually code the ash and sulfur contents on the type-4 zero pollutant transactions. These transactions will be automatically generated by PCVNEEF (EP0020) when converting NEDS transactions to EIS/PS emission factor file transactions; however, the ash and sulfur contents fields will be blank since NEDS transactions do not contain this data. The file built by test run 1 is supplied with federal "average" ash and sulfur contents for appropriate SCC's. These values may be used or the user can revise those values to suit fuels in his specific area.

The EIS/PS transactions must be sorted into master file sequence by PSREFTR (EP0030) prior to being used by PEMEFAC (EP0040). The sort program also generates a header record for the transaction file.

4.2.5.7 Cost Considerations

To reduce the cost of executing PEMEFAC (EP0040), the user may wish to suppress warning messages and file listings. This is accomplished by leaving the associated option card fields blank.

The estimates listed below are based on the execution of the run stream in Section 4.2.5.5.4 on an IBM 370/168:

Number of emission factor file transactions:	302 transactions
Number of input emission factor file records:	565 records
Number of input emission factor description file records:	102 records
Number of output emission factor file records:	638 records
Number of output emission factor description file records:	101 records
CPU time:	1.68 seconds
I/O time:	3.21 seconds
Total time:	4.87 seconds
Estimated cost:	$.68

.2.5.8 Related Programs and Procedures

PSREFTR (EP0030), the emission factor file transaction sort program, must be run prior to executing PEMEFAC (EP0040). Both programs are executed by the cataloged procedure EPEME10, which is discussed in Section 4.2.5.5.

Two other programs related to PEMEFAC (EP0040) are the NEDS emission factor file transaction sort program, PSRNEEF (EP0010), and the NEDS to EIS/PS emission factor file transaction conversion program, PCVNEEF (EP0020). Refer to Sections 4.2.2 and 4.2.3, respectively, for a discussion of these programs.

All four of the programs listed above can be executed by the multi-program cataloged procedure EPEME20. Refer to Section 4.4.2 for a discussion of this procedure.

Header Record

Columns	Field Length	Description
1 - 15	15	Zeroes
16 - 20	5	Control Date
21 - 25	5	Previous Control Date
26 - 31	6	File Generation Number
32 - 70	39	Not Used

(Page 1 of 2)

Figure 4.2.5-a. Emission Factor File Record Formats

Emission Factor File Record

Columns	Field Length	Description
1 - 8	8	SCC Number
9	1	Emission Factor Origin
10	1	Emission Factor Source Type
11 - 15	5	Pollutant ID
16 - 20	5	Record Date
21 - 25	5	Control Date
26 - 45	20	Pollutant Name
46 - 47	2	NEDS V Flags (not used)
48	1	Ash Flag
49	1	Sulfur Flag
50 - 51	2	Unit of Measure Code
52 - 60	9	Emission Factor
61 - 63	3	Ash Content*
64 - 66	3	Sulfur Content*
67 - 69	3	Control Device Efficiency
70	1	Emission Factor Confidence Level

---

*Only used in zero pollutant ID record

(Page 2 of 2)

Figure 4.2.5-a - continued. Emission Factor File Record Formats

Header Record

Columns	Field Length	Description
1 - 8	8	Zeroes
9 - 13	5	Control Date
14 - 18	5	Previous Control Date
19 - 24	6	File Generation Number
25 - 150	126	Not Used

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Figure 4.2.5-b. Emission Factor Description File Record Formats

Emission Factor Description Record

Columns	Field Length	Description
1 - 8	8	SCC Number
9 - 13	5	Record Date
14 - 30	17	SCC Description - Category 1
31 - 47	17	SCC Description - Category 2
48 - 64	17	SCC Description - Category 3
65 - 81	17	SCC Description - Category 4
82 - 116	35	Units Description, Characters 1 to 35
117 - 150	34	Units Description, Characters 36 to 69

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Figure 4.2.5-b - continued. Emission Factor Description File Record Formats

Header Card

Columns	Field Length	Data Type	Definition
1 - 22	22	Numeric	Zeroes
23 - 80	58		Not Used

(Page 1 of 5)

Figure 4.2.5-c. Emission Factor File Transaction Formats

Card 1

Columns	Field Length	Data Type	Description
1	1	Numeric	Card Type
2	1	Alphabetic	Action Code
3 - 10	8	Numeric	SCC Number
11 - 17	7	Blank	Key Alignment
18 - 22	5	Numeric	Date
23 - 39	17	Alphanumeric	SCC Description - Category 1
40 - 56	17	Alphanumeric	SCC Description - Category 2
57 - 73	17	Alphanumeric	SCC Description - Category 3
74 - 80	7		Not Used

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Figure 4.2.5-c - continued. Emission Factor File Transaction Formats

Card 2

Columns	Field Length	Data Type	Description
1	1	Numeric	Card Type
2	1	Alphabetic	Action Code
3 - 10	8	Numeric	SCC Number
11 - 17	7	Blank	Key Alignment
18 - 22	5	Numeric	Date
23 - 39	17	Alphanumeric	SCC Description - Category 4
40 - 74	35	Alphanumeric	Units Description, Characters 1 to 35
75 - 80	6		Not Used

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Figure 4.2.5-c - continued. Emission Factor File Transaction Formats

Card 3

Columns	Field Length	Data Type	Definition
1	1	Numeric	Card Type
2	1	Alphabetic	Action Code
3 - 10	8	Numeric	SCC Number
11 - 17	7	Blank	Key Alignment
18 - 22	5	Numeric	Date
23 - 56	34	Alphanumeric	Units Description, Characters 36 to 69
57 - 80	24		Not Used

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Figure 4.2.5-c - continued. Emission Factor File Transaction Formats

Card 4

Columns	Field Length	Data Type	Description
1	1	Numeric	Card Type
2	1	Alphabetic	Action Code
3 - 10	8	Numeric	SCC Number
11	1	Alphabetic	Emission Factor Origin
12	1	Alphanumeric	Emission Factor Source Type
13 - 17	5	Numeric	Pollutant ID
18 - 22	5	Numeric	Date
23 - 42	20	Alphanumeric	Pollutant Name
43 - 44	2		NEDS V Flags (not used)
45	1	Alphabetic	Ash Flag
46	1	Alphabetic	Sulfur Flag
47 - 48	2	Alphanumeric	Unit of Measure Code
49 - 57	9	Numeric	Emission Factor
58 - 60	3	Numeric	Ash Content*
61 - 63	3	Numeric	Sulfur Content*
64 - 66	3	Numeric	Control Device Efficiency
67	1	Alphanumeric	Emission Factor Confidence Level
68 - 80	13		Not Used

---

*Necessary only on zero pollutant transactions

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Figure 4.2.5-c - continued. Emission Factor File Transaction Formats

Action Code: Identifies the intended action of the transaction.
Valid Codes: A - Add, C - Change, D - Delete
Field Length: 1 character
Card Number: All transactions

Ash Content: A weight percentage which indicates the ash content for combustion processes.
Valid Codes: The field must be numeric.
Field Length: 3 characters with one decimal position assumed
Card Number: 4

Ash Flag: Indicates whether or not the ash content is to be used in the calculation of the estimated emissions.
Valid Codes: A - Ash content to be used
Blank - Ash content not to be used
Field Length: 1 character
Card Number: 4

Card Type: The card number of the transaction.
Valid Codes: 1, 2, 3, 4
Field Length: 1 character
Card Number: All transactions

Control Device Efficiency: The overall collection efficiencies in weight percentage of all control equipment at the source. Assume that the pollutant load entering the control equipment is the normal, uncontrolled quantity for that specific process.
Valid Codes: The field must be numeric.
Field Length: 3 characters with one decimal position assumed
Card Number: 4

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Figure 4.2.5-d. Data Field Definitions

Date: The Julian date of the transaction in the form YYDDD.
Valid Codes: YY must be a valid year; DDD must be a valid day from 1 to 366.
Field Length: 5 characters
Card Number: All transactions

Emission Factor: A statistical average of the rate at which a pollutant is released into the atmosphere as a result of some activity.
Valid Codes: The field must be numeric. The emission factors for each SCC can be found in Compilation of Air Pollutant Emission Factors, EPA Publication no. AP-42.
Field Length: 9 characters with 3 decimal positions assumed
Card Number: 4

Emission Factor Confidence Level: A user-defined value assigned to show the reliability of the emission factor.
Valid Codes: The field must be numeric or blank.
Field Length: 1 character
Card Number: 4

Emission Factor Origin: Indicates the origin of the emission factor information.
Valid Codes: F - Federal
S - State
L - Local
Field Length: 1 character
Card Number: 4

Emission Factor Source Type: A user-defined code to specify individual local emission factor information.

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Figure 4.2.5-d - continued. Data Field Definitions

Valid Codes: User-specified
Field Length: 1 character
Card Number: 4

NEDS V Flags: Reserved for future use.
Field Length: 2 characters
Card Number: 4

Pollutant ID: The SAROAD parameter code of the pollutant whose emissions are being measured.
Valid Codes: The field must be numeric. Refer to AEROS Manual Series, Volume V: AEROS Manual of Codes for a listing of SAROAD parameter codes.
Field Length: 5 characters
Card Number: 4

Pollutant Name: The actual name or the chemical representation of the pollutant referred to by the pollutant ID.
Valid Codes: Refer to AEROS Manual Series, Volume V: AEROS Manual of Codes
Field Length: 20 characters
Card Number: 4

SCC Description: Information pertaining to the process associated with a given SCC. The field is divided into 4 subfields each of which is 17 characters in length. The 4 subfields contain descriptions of the 4 parts of the SCC number.
Valid Codes: Refer to AEROS Manual Series, Volume V: AEROS Manual of Codes, Section 3.7.0 for the given SCC.
Field Length: 68 characters

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Figure 4.2.5-d - continued. Data Field Definitions

Card Number: 1 - Subfields 1, 2, and 3
2 - Subfield 4

SCC Number: The source classification code number that describes the process.
Valid Codes: Refer to AEROS Manual Series, Volume V: AEROS Manual o Codes, Section 3.7.0 for SCC numbers.
Field Length: 8 characters
Card Number: All transactions

Sulfur Content: A weight percentage which indicates the sulfur content for combustion processes.
Valid Codes: The field must be numeric.
Field Length: 3 characters with 2 decimal positions assumed
Card Number: 4

Sulfur Flag: Indicates whether or not the sulfur content is to be used in the calculation of the estimated emissions.
Valid Codes: S - Sulfur content to be used
Blank - Sulfur content not to be used
Field Length: 1 character
Card Number: 4

Unit of Measure Code: This field is not used at present; in the future this field will allow emission factors to be coded in units other than the NEDS units.
Field Length: 2 characters
Card Number: 4

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Figure 4.2.5-d - continued. Data Field Definitions

Units Description: Information pertaining to the unit of measure code which describes the units in which the emission factor is calculated.

Valid Codes: Refer to AEROS Manual Series, Volume V: AEROS Manual of Codes, Section 3.7.0 for the given SCC.

Field Length: 69 characters

Card Number: 2 - Characters 1 to 35
3 - Characters 36 to 69

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Figure 4.2.5-d - continued. Data Field Definitions

```
                    EIS/PS EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM  -  DIAGNOSTIC REPORT                    PAGE    1

PROGRAM NAME: PEMEFAC (EP0040)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

   CONTROL DATE IS 80057,  ERROR OPTION IS FLAG   ,  LIST OPTION IS LIST



NUMBER OF INPUT TRANSACTIONS READ:                             868
NUMBER OF ABORT MESSAGES:                                        0
NUMBER OF DISASTER MESSAGES:                                     0
NUMBER OF ERROR MESSAGES:                                        0
NUMBER OF WARNING MESSAGES:                                      0
NUMBER OF CONDITIONAL MESSAGES:                                  0
NUMBER OF TRANSACTIONS REJECTED:                                 0
NUMBER OF SCC-DESCRIPTION FILE RECORDS READ:                     0
NUMBER OF SCC-DESCRIPTION FILE RECORDS WRITTEN:                102
NUMBER OF SCC-EMISSION-FACTOR FILE RECORDS READ:                 0
NUMBER OF SCC-EMISSION-FACTOR FILE RECORDS WRITTEN:            565
```

Figure 4.2.5-e. Diagnostic Report

```
                    EIS/PS EMF UPDATE - EMISSION FACTOR FILE INPUT LIST                                   PAGE    1
000000000000000080057/      000001
101001011 000008005780057
101001011 111018005780057PARTICULATE FACTOR     A   000017000
101001011 421018005780057CO FACTOR                  000001000
101001011 424018005780057SO2 FACTOR              S  000038000
101001011 426028005780057NOX FACTOR                 000018000
101001011 431018005780057HC FACTOR                  000000000
101001051 000008005780057
101001051 111018005780057PARTICULATE FACTOR     A   000017000
101001051 421018005780057CO FACTOR                  000001000
101001051 424018005780057SO2 FACTOR              S  000038000
101001051 426028005780057NOX FACTOR                 000018000
101001051 431018005780057HC FACTOR                  000000030
101001061 000008005780057
101001061 111018005780057PARTICULATE FACTOR     A   000062000
101001061 421018005780057CO FACTOR                  000010000
101001061 424018005780057SO2 FACTOR              S  000038000
101001061 426028005780057NOX FACTOR                 000006000
101001061 431018005780057HC FACTOR                  000000200
102002041 000008005780057
102002041 111018005780057PARTICULATE FACTOR     A   000013000
102002041 421018005780057CO FACTOR                  000002000
102002041 424018005780057SO2 FACTOR              S  000038000
102002041 426028005780057NOX FACTOR                 000015000
102002041 431018005780057HC FACTOR                  000001000
102002051 000008005780057
102002051 111018005780057PARTICULATE FACTOR     A   000005000
102002051 421018005780057CO FACTOR                  000002000
102002051 424018005780057SO2 FACTOR              S  000038000
102002051 426028005780057NOX FACTOR                 000015000
102002051 431018005780057HC FACTOR                  000001000
102002061 000008005780057
102002061 111018005780057PARTICULATE FACTOR     A   000005000
102002061 421018005780057CO FACTOR                  000002000
102002061 424018005780057SO2 FACTOR              S  000038000
102002061 426028005780057NOX FACTOR                 000015000
102002061 431018005780057HC FACTOR                  000001000
102002071 000008005780057
102002071 111018005780057PARTICULATE FACTOR     A   000013000
102002071 421018005780057CO FACTOR                  000001000
102002071 424018005780057SO2 FACTOR              S  000038000
102002071 426028005780057NOX FACTOR                 000030000
102002071 431018005780057HC FACTOR                  000000300
102004011 000008005780057
102004011 111018005780057PARTICULATE FACTOR     S   000012000
102004011 421018005780057CO FACTOR                  000005000
102004011 424018005780057SO2 FACTOR              S  000159000
102004011 426028005780057NOX FACTOR                 000060000
102004011 431018005780057HC FACTOR                  000001000
102004021 000008005780057
```

Figure 4.2.5-f. Input Emission Factor File Listing

```
                              EIS/PS EMF UPDATE - SCC DESCRIPTION FILE INPUT LIST                                   PAGE    1

00000000A0057     000001
10100101A0057EXTCOMB BOILER    ELECTRIC GENERATNANTHRACITE COAL  PULVERIZED COAL  TONS BURNED
10100105A0057EXTCOMB BOILER    ELECTRIC GENERATNANTHRACITE COAL  <10MMBTU PULVIZ**TONS BURNED
10100106A0057EXTCOMB BOILER    ELECTRIC GENERATNANTHRACITE COAL  <10MMBTU STOKER**TONS BURNED
10200204A0057EXTCOMB BOILER    INDUSTRIAL       BITUMINOUS COAL  SPREADER STOKER  TONS BURNED
10200205A0057EXTCOMB BOILER    INDUSTRIAL       BITUMINOUS COAL  OF/UF >10MMBTU/HRTONS BURNED
10200206A0057EXTCOMB BOILER    INDUSTRIAL       BITUMINOUS COAL  10-100MMBTU OFS**TONS BURNED
10200207A0057EXTCOMB BOILER    INDUSTRIAL       BITUMINOUS COAL  10-100MMBTU PUL**TONS BURNED
10200401A0057EXTCOMB BOILER    INDUSTRIAL       RESIDUAL OIL     NO 6 OIL         1000 GALLONS BURNED
10200402A0057EXTCOMB BOILER    INDUSTRIAL       RESIDUAL OIL     10-100MMBTU/HR **1000 GALLONS BURNED
10200403A0057EXTCOMB BOILER    INDUSTRIAL       RESIDUAL OIL     <10MMBTU/HR    **1000 GALLONS BURNED
10200404A0057EXTCOMB BOILER    INDUSTRIAL       RESIDUAL OIL     NO 5 OIL         1000 GALLONS BURNED
10200501A0057EXTCOMB BOILER    INDUSTRIAL       DISTILLATE OIL   NO 1 AND NO 2 OIL1000 GALLONS BURNED
10200502A0057EXTCOMB BOILER    INDUSTRIAL       DISTILLATE OIL   10-100MMBTU/HR **1000 GALLONS BURNED
10200503A0057EXTCOMB BOILER    INDUSTRIAL       DISTILLATE OIL   <10MMBTU/HR    **1000 GALLONS BURNED
10200504A0057EXTCOMB BOILER    INDUSTRIAL       DISTILLATE OIL   NO 4 OIL         1000 GALLONS BURNED
10200601A0057EXTCOMB BOILER    INDUSTRIAL       NATURAL GAS      >100MMBTU/HR       MILLION CUBIC FEET BURNED
10200602A0057EXTCOMB BOILER    INDUSTRIAL       NATURAL GAS      10-100MMBTU/HR     MILLION CUBIC FEET BURNED
10200603A0057EXTCOMB BOILER    INDUSTRIAL       NATURAL GAS      <10MMBTU/HR        MILLION CUBIC FEET BURNED
10201102A0057EXTCOMB BOILER    INDUSTRIAL       BAGASSE          10-100MMBTU/HR **TONS BURNED
10201103A0057EXTCOMB BOILER    INDUSTRIAL       BAGASSE          <10MMBTU/HR    **TONS BURNED
10300209A0057EXTCOMB BOILER    COMMERCL-INSTUTNLBITUMINOUS COAL  SPREADER STOKER  TONS BURNED
10300402A0057EXTCOMB BOILER    COMMERCL-INSTUTNLRESIDUAL OIL     10-100MMBTU/HR **1000 GALLONS BURNED
10300403A0057EXTCOMB BOILER    COMMERCL-INSTUTNLRESIDUAL OIL     <10MMBTU/HR    **1000 GALLONS BURNED
10300404A0057EXTCOMB BOILER    COMMERCL-INSTUTNLRESIDUAL OIL     NO 5 OIL         1000 GALLONS BURNED
10300501A0057EXTCOMB BOILER    COMMERCL-INSTUTNLDISTILLATE OIL   NO 1 AND NO 2 OIL1000 GALLONS BURNED
10300502A0057EXTCOMB BOILER    COMMERCL-INSTUTNLDISTILLATE OIL   10-100MMBTU/HR **1000 GALLONS BURNED
10300503A0057EXTCOMB BOILER    COMMERCL-INSTUTNLDISTILLATE OIL   <10MMBTU/HR    **1000 GALLONS BURNED
10300504A0057EXTCOMB BOILER    COMMERCL-INSTUTNLDISTILLATE OIL   NO 4 OIL         1000 GALLONS BURNED
10300601A0057EXTCOMB BOILER    COMMERCL-INSTUTNLNATURAL GAS      >100MMBTU/HR       MILLION CUBIC FEET BURNED
10300602A0057EXTCOMB BOILER    COMMERCL-INSTUTNLNATURAL GAS      10-100MMBTU/HR     MILLION CUBIC FEET BURNED
10300603A0057EXTCOMB BOILER    COMMERCL-INSTUTNLNATURAL GAS      <10MMBTU/HR        MILLION CUBIC FEET BURNED
30100501A0057CHEMICAL MFG      CARBON BLACK     CHANNEL PROCESS
30101302A0057CHEMICAL MFG      AGRICULTURAL CHEMNITRIC ACID      ABSRBR TAILGAS/NMTONS PURE ACID PRODUCED
30200101A0057FOOD/AGRICULTURE  ALFALFA DEHYDRATNGENERAL          GENERAL        **TONS MEAL PRODUCED
30200102A0057FOOD/AGRICULTURE  ALFALFA DEHYDRATNCYCLONE AND DRYERPRIMARY            TONS PRODUCT
30200103A0057FOOD/AGRICULTURE  ALFALFA DEHYDRATNMEAL COLLECTOR   CYCLONE            TONS PRODUCT
30200104A0057FOOD/AGRICULTURE  ALFALFA DEHYDRATNPELLET COOLER    CYCLONE            TONS PRODUCT
30200201A0057FOOD/AGRICULTURE  COFFEE ROASTING  ROASTER          DIRECT FIRED       TONS GREEN BEANS
30200202A0057FOOD/AGRICULTURE  COFFEE ROASTING  ROASTER          INDIRECT FIRED     TONS GREEN BEANS
30200501A0057FOOD/AGRICULTURE  GRAIN ELEVATORS  TERMINAL ELEVATORSHIPING/RECEIVI**TONS GRAIN PROCESSED
30200502A0057FOOD/AGRICULTURE  GRAIN ELEVATORS  TERMINAL ELEVATORTRANSFER/CONVEY**TONS GRAIN PROCESSED
30500105A0057PETROLEUM INDRY   ASPHALT ROOFING  FELT SAT OPERATN                    TONS SATURATED FELT PRODUCED
30500201A0057PETROLEUM INDRY   ASPHALT CONCRETE ROTARY DRYER     CONVENTIONAL PLNTTONS PRODUCED
30500202A0057PETROLEUM INDRY   ASPHALT CONCRETE HOT EV/SCN/BIN/MX                   TONS PRODUCED
30500203A0057PETROLEUM INDRY   ASPHALT CONCRETE STORAGE PILES                       TONS PROCESSED
30501601A0057MINERAL PRODUCTS  LIME MFG         PRIMARY CRUSHING                    TONS PROCESSED
30501602A0057MINERAL PRODUCTS  LIME MFG         SECOND CRUSH/SCRN                   TONS PROCESSED
30501603A0057MINERAL PRODUCTS  LIME MFG         CALCINING        VERTICAL KILN      TONS PROCESSED
30501604A0057MINERAL PRODUCTS  LIME MFG         CALCINING        ROTARY KILN        TONS PROCESSED
```

Figure 4.2.5-g. Input Emission Factor Description File Listing

```
                                EIS/PS EMF UPDATE - EMISSION FACTOR FILE OUTPUT FILE                         PAGE    1
00000000000000080057      000001
101001011 0000080057R0057
101001011 111018005780057PARTICULATE FACTOR    A    000017000
101001011 421018005780057CO FACTOR                  000001000
101001011 424018005780057SO2 FACTOR              S   000038000
101001011 426028005780057NOX FACTOR                 000018000
101001011 431018005780057HC FACTOR                  000000000
101001051 0000080057R0057
101001051 111018005780057PARTICULATE FACTOR    A    000017000
101001051 421018005780057CO FACTOR                  000001000
101001051 424018005780057SO2 FACTOR              S   000038000
101001051 426028005780057NOX FACTOR                 000018000
101001051 431018005780057HC FACTOR                  000000030
101001061 0000080057R0057
101001061 111018005780057PARTICULATE FACTOR    A    000002000
101001061 421018005780057CO FACTOR                  000010000
101001061 424018005780057SO2 FACTOR              S   000038000
101001061 426028005780057NOX FACTOR                 000006000
101001061 431018005780057HC FACTOR                  000000200
102002041 0000080057R0057
102002041 111018005780057PARTICULATE FACTOR    A    000013000
102002041 421018005780057CO FACTOR                  000002000
102002041 424018005780057SO2 FACTOR              S   000038000
102002041 426028005780057NOX FACTOR                 000015000
102002041 431018005780057HC FACTOR                  000001000
102002051 0000080057R0057
102002051 111018005780057PARTICULATE FACTOR    A    000005000
102002051 421018005780057CO FACTOR                  000002000
102002051 424018005780057SO2 FACTOR              S   000038000
102002051 426028005780057NOX FACTOR                 000015000
102002051 431018005780057HC FACTOR                  000001000
102002061 0000080057R0057
102002061 111018005780057PARTICULATE FACTOR    A    000005000
102002061 421018005780057CO FACTOR                  000002000
102002061 424018005780057SO2 FACTOR              S   000038000
102002061 426028005780057NOX FACTOR                 000015000
102002061 431018005780057HC FACTOR                  000001000
102002071 0000080057R0057
102002071 111018005780057PARTICULATE FACTOR    A    000013000
102002071 421018005780057CO FACTOR                  000001000
102002071 424018005780057SO2 FACTOR              S   000038000
102002071 426028005780057NOX FACTOR                 000030000
102002071 431018005780057HC FACTOR                  000000300
102004011 0000080057R0057
102004011 111018005780057PARTICULATE FACTOR    S    000012000
102004011 421018005780057CO FACTOR                  000005000
102004011 424018005780057SO2 FACTOR              S   000159000
102004011 426028005780057NOX FACTOR                 000060000
102004011 431018005780057HC FACTOR                  000001000
102004021 0000080057R0057
```

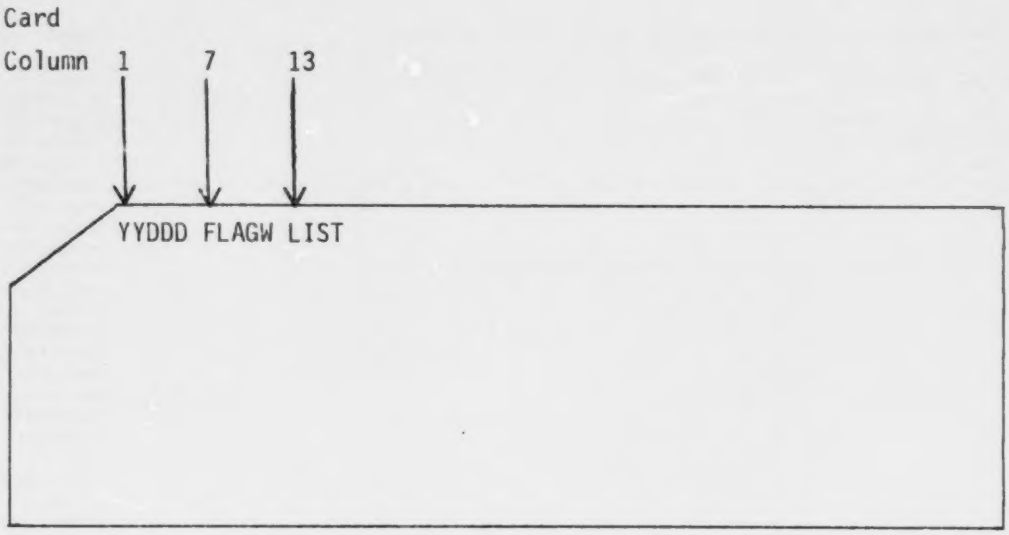
Figure 4.2.5-h. Output Emission Factor File Listing

```
                      EIS/PS EMF UPDATE - SCC DESCRIPTION FILE OUTPUT LIST                                      PAGE    1

00000000R0057     000001
10100101R0057EXTCOMB BOILER   ELECTRIC GENERATNANTHRACITE COAL  PULVERIZED COAL  TONS BURNED
10100105R0057EXTCOMB BOILER   ELECTRIC GENERATNANTHRACITE COAL  <10MMBTU PULVIZ**TONS BURNED
10100106R0057EXTCOMB BOILER   ELECTRIC GENERATNANTHRACITE COAL  <10MMBTU STOKER**TONS BURNED
10200204R0057EXTCOMB BOILER   INDUSTRIAL       BITUMINOUS COAL  SPREADER STOKER  TONS BURNED
10200205R0057EXTCOMB BOILER   INDUSTRIAL       BITUMINOUS COAL  UF/OF >10MMBTU/HRTONS BURNED
10200206R0057EXTCOMB BOILER   INDUSTRIAL       BITUMINOUS COAL  10-100MMBTU UFS**TONS BURNED
10200207R0057EXTCOMB BOILER   INDUSTRIAL       BITUMINOUS COAL  10-100MMBTU PUL**TONS BURNED
10200401R0057EXTCOMB BOILER   INDUSTRIAL       RESIDUAL OIL     NO 6 OIL         1000 GALLONS BURNED
10200402R0057EXTCOMB BOILER   INDUSTRIAL       RESIDUAL OIL     10-100MMBTU/HR **1000 GALLONS BURNED
10200403R0057EXTCOMB BOILER   INDUSTRIAL       RESIDUAL OIL     <10MMBTU/HR    **1000 GALLONS BURNED
10200404R0057EXTCOMB BOILER   INDUSTRIAL       RESIDUAL OIL     NO 5 OIL         1000 GALLONS BURNED
10200501R0057EXTCOMB BOILER   INDUSTRIAL       DISTILLATE OIL   NO 1 AND NO 2 OIL1000 GALLONS BURNED
10200502R0057EXTCOMB BOILER   INDUSTRIAL       DISTILLATE OIL   10-100MMBTU/HR **1000 GALLONS BURNED
10200503R0057EXTCOMB BOILER   INDUSTRIAL       DISTILLATE OIL   <10MMBTU/HR    **1000 GALLONS BURNED
10200504R0057EXTCOMB BOILER   INDUSTRIAL       DISTILLATE OIL   NO 4 OIL         1000 GALLONS BURNED
10200601R0057EXTCOMB BOILER   INDUSTRIAL       NATURAL GAS      >100MMBTU/HR     MILLION CUBIC FEET BURNED
10200602R0057EXTCOMB BOILER   INDUSTRIAL       NATURAL GAS      10-100MMBTU/HR   MILLION CUBIC FEET BURNED
10200603R0057EXTCOMB BOILER   INDUSTRIAL       NATURAL GAS      <10MMBTU/HR      MILLION CUBIC FEET BURNED
10201102R0057EXTCOMB BOILER   INDUSTRIAL       BAGASSE          10-100MMBTU/HR **TONS BURNED
10201103R0057EXTCOMB BOILER   INDUSTRIAL       BAGASSE          <10MMBTU/HR    **TONS BURNED
10300209R0057EXTCOMB BOILER   COMMERCL-INSTUTNLBITUMINOUS COAL  SPREADER STOKER  TONS BURNED
10300402R0057EXTCOMB BOILER   COMMERCL-INSTUTNLRESIDUAL OIL     10-100MMBTU/HR **1000 GALLONS BURNED
10300403R0057EXTCOMB BOILER   COMMERCL-INSTUTNLRESIDUAL OIL     <10MMBTU/HR    **1000 GALLONS BURNED
10300404R0057EXTCOMB BOILER   COMMERCL-INSTUTNLRESIDUAL OIL     NO 5 OIL         1000 GALLONS BURNED
10300501R0057EXTCOMB BOILER   COMMERCL-INSTUTNLDISTILLATE OIL   NO 1 AND NO 2 OIL1000 GALLONS BURNED
10300502R0057EXTCOMB BOILER   COMMERCL-INSTUTNLDISTILLATE OIL   10-100MMBTU/HR **1000 GALLONS BURNED
10300503R0057EXTCOMB BOILER   COMMERCL-INSTUTNLDISTILLATE OIL   <10MMBTU/HR    **1000 GALLONS BURNED
10300504R0057EXTCOMB BOILER   COMMERCL-INSTUTNLDISTILLATE OIL   NO 4 OIL         1000 GALLONS BURNED
10300601R0057EXTCOMB BOILER   COMMERCL-INSTUTNLNATURAL GAS      >100MMBTU/HR     MILLION CUBIC FEET BURNED
10300602R0057EXTCOMB BOILER   COMMERCL-INSTUTNLNATURAL GAS      10-100MMBTU/HR   MILLION CUBIC FEET BURNED
10300603R0057EXTCOMB BOILER   COMMERCL-INSTUTNLNATURAL GAS      <10MMBTU/HR      MILLION CUBIC FEET BURNED
30100501R0057CHEMICAL MFG     CARBON BLACK     CHANNEL PROCESS
30101302R0057CHEMICAL MFG     AGRICULTURAL CHEMNITRIC ACID      ABSRBR TAILGAS/NWTONS PURE ACID PRODUCED
30200101R0057FOOD/AGRICULTURE ALFALFA DEHYDRATNGENERAL          GENERAL        **TONS MEAL PRODUCED
30200102R0057FOOD/AGRICULTURE ALFALFA DEHYDRATICYCLONE AND DRYERPRIMARY          TONS PRODUCT
30200103R0057FOOD/AGRICULTURE ALFALFA DEHYDRATIMEAL COLLECTOR   CYCLONE          TONS PRODUCT
30200104R0057FOOD/AGRICULTURE ALFALFA DEHYDRATIPELLET COOLER    CYCLONE          TONS PRODUCT
30200201R0057FOOD/AGRICULTURE COFFEE ROASTING  ROASTER          DIRECT FIRED     TONS GREEN BEANS
30200202R0057FOOD/AGRICULTURE COFFEE ROASTING  ROASTER          INDIRECT FIRED   TONS GREEN BEANS
30200501R0057FOOD/AGRICULTURE GRAIN ELEVATORS  TERMINAL ELEVATORSHIPING/RECEIVI**TONS GRAIN PROCESSED
30200502R0057FOOD/AGRICULTURE GRAIN ELEVATORS  TERMINAL ELEVATORTRANSFER/CONVEY**TONS GRAIN PROCESSED
30500105R0057PETROLEUM INDRY  ASPHALT ROOFING  FELT SAT OPERATN                  TONS SATURATED FELT PRODUCED
30500201R0057PETROLEUM INDRY  ASPHALT CONCRETE ROTARY DRYER     CONVENTIONAL PLNTTONS PRODUCED
30500202R0057PETROLEUM INDRY  ASPHALT CONCRETE HOT EV/SCN/BIN/MX                 TONS PRODUCED
30500203R0057PETROLEUM INDRY  ASPHALT CONCRETE STORAGE PILES                     TONS PROCESSED
30501601R0057MINERAL PRODUCTS LIME MFG         PRIMARY CRUSHING                  TONS PROCESSED
30501602R0057MINERAL PRODUCTS LIME MFG         SECOND CRUSH/SCRN                 TONS PROCESSED
30501603R0057MINERAL PRODUCTS LIME MFG         CALCINING        VERTICAL KILN    TONS PROCESSED
30501604R0057MINERAL PRODUCTS LIME MFG         CALCINING        ROTARY KILN      TONS PROCESSED
```

Figure 4.2.5-i. Output Emission Factor Description File Listing

```
                              EIS/PS EMF UPDATE - TRANSACTION FILE LIST                                    PAGE    1

0000000000000000000000000000000000000000000000000000000000000000000000000000000000
1A10100101         80057EXTCOMB BOILER   ELECTRIC GENERATNANTHRACITE COAL
2A10100101         80057PULVERIZED COAL  TONS BURNED
3A10100101         80057                                  0
4A10100101F 0000080057
4A10100101F 1110180057PARTICULATE FACTOR    A   000017000
4A10100101F 4210180057CO FACTOR                 000001000
4A10100101F 4240180057SO2 FACTOR             S  000038000
4A10100101F 4260280057NOX FACTOR                000018000
4A10100101F 4310180057HC FACTOR                 000000000
1A10100105         80057EXTCOMB BOILER   ELECTRIC GENERATNANTHRACITE COAL
2A10100105         80057<10MMBTU PULVIZ**TONS BURNED
3A10100105         80057                                  0
4A10100105F 0000080057
4A10100105F 1110180057PARTICULATE FACTOR    A   000017000
4A10100105F 4210180057CO FACTOR                 000001000
4A10100105F 4240180057SO2 FACTOR             S  000038000
4A10100105F 4260280057NOX FACTOR                000018000
4A10100105F 4310180057HC FACTOR                 000000030
1A10100106         80057EXTCOMB BOILER   ELECTRIC GENERATNANTHRACITE COAL
2A10100106         80057<10MMBTU STOKER**TONS BURNED
3A10100106         80057                                  0
4A10100106F 0000080057
4A10100106F 1110180057PARTICULATE FACTOR    A   000002000
4A10100106F 4210180057CO FACTOR                 000010000
4A10100106F 4240180057SO2 FACTOR             S  000038000
4A10100106F 4260280057NOX FACTOR                000006000
4A10100106F 4310180057HC FACTOR                 000000200
1A10200204         80057EXTCOMB BOILER   INDUSTRIAL        BITUMINOUS COAL
2A10200204         80057SPREADER STOKER  TONS BURNED
3A10200204         80057                                  0
4A10200204F 0000080057
4A10200204F 1110180057PARTICULATE FACTOR    A   000013000
4A10200204F 4210180057CO FACTOR                 000002000
4A10200204F 4240180057SO2 FACTOR             S  000038000
4A10200204F 4260280057NOX FACTOR                000015000
4A10200204F 4310180057HC FACTOR                 000001000
1A10200205         80057EXTCOMB BOILER   INDUSTRIAL        BITUMINOUS COAL
2A10200205         80057OF/UF >10MMBTU/HRTONS BURNED
3A10200205         80057                                  0
4A10200205F 0000080057
4A10200205F 1110180057PARTICULATE FACTOR    A   000005000
4A10200205F 4210180057CO FACTOR                 000002000
4A10200205F 4240180057SO2 FACTOR             S  000038000
4A10200205F 4260280057NOX FACTOR                000015000
4A10200205F 4310180057HC FACTOR                 000001000
1A10200206         80057EXTCOMB BOILER   INDUSTRIAL        BITUMINOUS COAL
2A10200206         8005710-100MMBTU OFS**TONS BURNED
3A10200206         80057                                  0
4A10200206F 0000080057
```

Figure 4.2.5-j. Transaction Listing



Note: YYDDD represents the Julian date (year/day)

Figure 4.2.5-k. Option Card Format

```
//* EPALMH/A087 HEDGEPETH, LLOYD 4. (919) 541-5491
//*
//*   PROCEDURE NAME: EPEME10
//*   REVISION LEVEL: 1-00
//*   LAST UPDATE: 28
//*   DATE INCORPORATED: JULY 1, 1979
//*
//*   THIS PROCEDURE ALLOWS THE USER TO MAINTAIN THE EIS/PS EMISSION
//*   FACTOR FILE
//*
//*
//EPEME10 PROC PROJECT='CN.EPALSH.A087.CDHS.HW.PNT',
//             PROG1=PSREFIN,
//             PROG2=PEMEFAC,
//             REGION1=150K,
//             REGION2=100K,
//             TIME1='1,0',
//             TIME2='1,0',
//             OLDEMFC=EPOLDEMF,
//             OLDDESC=EPOLDDSC,
//             NEWEMFC=EPNEWEMF,
//             NEWDESC=EPNEWDSC,
//             UNIT1=3330,
//             UNIT2=3330,
//             SERIAL1=CDHSPK,
//             SERIAL2=CDHSPK,
//             DISP1='NEW,CATLG,DELETE',
//             DISP2='NEW,CATLG,DELETE',
//             SPCUNT1=TRK,
//             SPCUNT2=TRK,
//             PRIMRY1=20,
//             PRIMRY2=20,
//             SECNDY1=10,
//             SECNDY2=10,
//             TEMP=SYSDA,
//             WORKSPC='20,10',
//             OUT=A
//*
//*
//SORT    EXEC  PGM=&PROG1,
//             REGION=&REGION1,
//             TIME=(&TIME1)
//*
//* SORT EMISSION FACTOR FILE TRANSACTIONS INTO FILE SEQUENCE
//*
//STEPLIB   DD DSNAME=&PROJECT..LOAD,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//SORTLIB   DD DSNAME=SYS1.SORTLIB,
//             DISP=(SHR,PASS)
//*
//SORTWK01  DD UNIT=&TEMP,
//             SPACE=(TRK,(&WORKSPC),,CONTIG)
//*
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),
//             SPACE=(TRK,(&WORKSPC),,CONTIG)
```

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Figure 4.2.5-1. Cataloged Procedure EPEME10

```
//*
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),
//             SPACE=(TRK,(&WORKSPC),,CONTIG)
//*
//* INPUT DATA SET - EMISSION FACTOR FILE TRANSACTIONS
//*
//EPSINPT   DD DDNAME=INPUT,
//             DCB=BLKSIZE=80
//*
//* OUTPUT DATA SET - SORTED EMISSION FACTOR FILE TRANSACTIONS
//*
//EPSOUTP   DD DSNAME=&&SORTED,
//             UNIT=&TEMP,
//             DISP=(NEW,PASS,DELETE),
//             SPACE=(TRK,(&WORKSPC),RLSE)
//*
//* OUTPUT DATA SET - DIAGNOSTIC REPORT
//*
//EPSDIAG   DD SYSOUT=&OUT
//*
//* OUTPUT DATA SETS - SYSTEM OPERATION
//*
//SYSPRINT  DD SYSOUT=&OUT
//*
//SYSOUT    DD SYSOUT=&OUT
//*
//SYSDBOUT  DD SYSOUT=&OUT
//*
//SYSDTERM  DD SYSOUT=&OUT
//*
//SYSUDUMP  DD SYSOUT=&OUT
//*
//*
//UPDATE  EXEC PGM=&PROG2,
//             REGION=&REGION2,
//             TIME=(&TIME2)
//*
//* MAINTAIN EIS/PS EMISSION FACTOR FILE
//*
//STEPLIB   DD DSNAME=&PROJECT..LOAD,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//*
//* INPUT DATA SET - MAINTENANCE CONTROL CARD
//*
//EPSOPTN   DD DDNAME=OPTIONS,
//             DCB=BLKSIZE=80
//*
//* INPUT DATA SET - SORTED EMISSION FACTOR FILE TRANSACTIONS
//*
//EPSTRAN   DD DSNAME=&&SORTED,
//             DISP=(SHR,PASS)
//*
//* INPUT DATA SET - OLD EMISSION FACTOR FILE
//*
//EPSOLEF   DD DSNAME=&PROJECT..DATA.&OLDREF,
```

(Page 2 of 4)

Figure 4.2.5-1 - continued. Cataloged Procedure EPEME10

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```
//                VOLUME=(PRIVATE,RETAIN),                                        00011300
//                DISP=(SHR,PASS)                                                 00011400
//*                                                                               00011500
//* INPUT DATA SET - OLD EMISSION FACTOR DESCRIPTION FILE                         00011600
//*                                                                               00011700
//EPSOLDS    DD DSNAME=&PROJECT..DATA.&OLDDESC,                                   00011800
//                VOLUME=(PRIVATE,RETAIN),                                        00011900
//                DISP=(SHR,PASS)                                                 00012000
//*                                                                               00012100
//* OUTPUT DATA SET - NEW EMISSION FACTOR FILE                                    00012200
//*                                                                               00012300
//EPSNWEF    DD DSNAME=&PROJECT..DATA.&NEWEMFC,                                   00012400
//                VOLUME=(PRIVATE,RETAIN,SER=&SERIAL1),                           00012500
//                DISP=(&DISP1),                                                  00012600
//                UNIT=&UNIT1,                                                    00012700
//                SPACE=(&SPCUNIT1,(&PRIMRY1,&SECNDY1),RLSE)                      00012800
//*                                                                               00012900
//* OUTPUT DATA SET - NEW EMISSION FACTOR DESCRIPTION FILE                        00013000
//*                                                                               00013100
//EPSNWDS    DD DSNAME=&PROJECT..DATA.&NEWDESC,                                   00013200
//                VOLUME=(PRIVATE,RETAIN,SER=&SERIAL2),                           00013300
//                DISP=(&DISP2),                                                  00013400
//                UNIT=&UNIT2,                                                    00013500
//                SPACE=(&SPCUNIT2,(&PRIMRY2,&SECNDY2),RLSE)                      00013600
//*                                                                               00013700
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                           00013800
//*                                                                               00013900
//EPSDIAG    DD SYSOUT=&OUT1                                                      00014000
//*                                                                               00014100
//* OUTPUT DATA SET - EMISSION FACTOR FILE TRANSACTION LISTING                    00014200
//*                                                                               00014300
//EPSTRNL    DD SYSOUT=&OUT1                                                      00014400
//*                                                                               00014500
//* OUTPUT DATA SET - OLD EMISSION FACTOR FILE LISTING                            00014600
//*                                                                               00014700
//EPSOEFL    DD SYSOUT=&OUT1                                                      00014800
//*                                                                               00014900
//* OUTPUT DATA SET - OLD EMISSION FACTOR DESCRIPTION FILE LISTING                00015000
//*                                                                               00015100
//EPSODSL    DD SYSOUT=&OUT1                                                      00015200
//*                                                                               00015300
//* OUTPUT DATA SET - NEW EMISSION FACTOR FILE LISTING                            00015400
//*                                                                               00015500
//EPSNEFL    DD SYSOUT=&OUT1                                                      00015600
//*                                                                               00015700
//* OUTPUT DATA SET - NEW EMISSION FACTOR DESCRIPTION FILE LISTING                00015800
//*                                                                               00015900
//EPSNDSL    DD SYSOUT=&OUT1                                                      00016000
//*                                                                               00016100
//* OUTPUT DATA SETS - SYSTEM OPERATION                                           00016200
//*                                                                               00016300
//SYSPRINT   DD SYSOUT=&OUT1                                                      00016400
//*                                                                               00016500
//SYSOUT     DD SYSOUT=&OUT1                                                      00016600
//*                                                                               00016700
//SYSUDUMP   DD SYSOUT=&OUT1                                                      00016800
```

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Figure 4.2.5-1 - continued. Cataloged Procedure EPEME10

```
//*                                                                     00016900
//SYSOTERM  DD  SYSOUT=R001                                             00017000
//*                                                                     00017100
//SYSUDUMP  DD  SYSOUT=R001                                             00017200
//*                                                                     00017300
//*                                                                     00017400
```

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Figure 4.2.5-1 - continued. Cataloged Procedure EPEME10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087.CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPOLDEMF would be the full data set name of the input emission factor file)
PROG1	PSREFTR	Emission factor file transaction sort program
PROG2	PEMEFAC	Emission factor file edit-maintenance program
REGION1	150K	Region size allocated for execution of PSREFTR
REGION2	100K	Region size allocated for execution of PEMEFAC
TIME1	'1,0'	Time (minutes, seconds) allocated for execution of PSREFTR
TIME2	'1,0'	Time (minutes, seconds) allocated for execution of PEMEFAC
OLDEMFC	EPOLDEMF	Lowest-level index of input emission factor file
OLDDESC	EPOLDDSC	Lowest-level index of input emission factor description file
NEWEMFC	EPNEWEMF	Lowest-level index of output emission factor file
NEWDESC	EPNEWDSC	Lowest-level index of output emission factor description file
UNIT1	3330	Unit type to which output emission factor file is to be written
UNIT2	3330	Unit type to which output emission factor description file is to be written

(Page 1 of 2)

Figure 4.2.5-m. Substitutable Parameters for EPEME10

Parameter Name	Default Value	Description
SERIAL1	CDHSPK	Volume serial number of the volume to which the output emission factor file is to be written
SERIAL2	CDHSPK	Volume serial number of the volume to which the output emission factor description file is to be written
DISP1	'NEW,CATLG,DELETE'	Disposition of the output emission factor file
DISP2	'NEW,CATLG,DELETE'	Disposition of the output emission factor description file
SPCUNT1	TRK	Units in which space for the output emission factor file is to be allocated
SPCUNT2	TRK	Units in which space for the output emission factor description file is to be allocated
PRIMRY1	20	Primary space allocation for the output emission factor file
PRIMRY2	20	Primary space allocation for the output emission factor description file
SECNDY1	10	Secondary space allocation for the output emission factor file
SECNDY2	10	Secondary space allocation for the output emission factor description file
TEMP	SYSDA	Unit type for temporary sort space
WORKSPC	'20,10'	Space allocation for the temporary sort files
OUT	A	SYSOUT class for all print files

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Figure 4.2.5-m - continued. Substitutable Parameters for EPEME10

4.3 MASTER FILE

4.3.1. INTRODUCTION

The EIS/PS master file is created and maintained by EIS/PS master file internal transactions. The internal transactions can be created from either EIS/PS format or NEDS format transactions. If the transactions are coded in EIS/PS format, they are input to the master file transaction sort program, PSRMFTR (EP0070), and passed to the master file transaction edit program, PEDMSTR (EP0080). PEDMSTR (EP0080) edits the transactions and creates internal trans-actions from those that pass the edit criteria. See Figure 4.3-a for a flowchart illustrating the EIS/PS master file transaction edit. If the transactions are coded in NEDS format, they are input to the NEDS transaction sort program, PSRNETR (EP0050), and passed to the NEDS to EIS/PS conversion-edit program, PCENETR (EP0060). PCENETR (EP0060) converts the transactions to EIS/PS format, edits the converted transactions, and creates internal transactions from those that pass the edit criteria. See Figure 4.3-b for a flowchart of the NEDS to EIS/PS master file transaction conversion-edit.

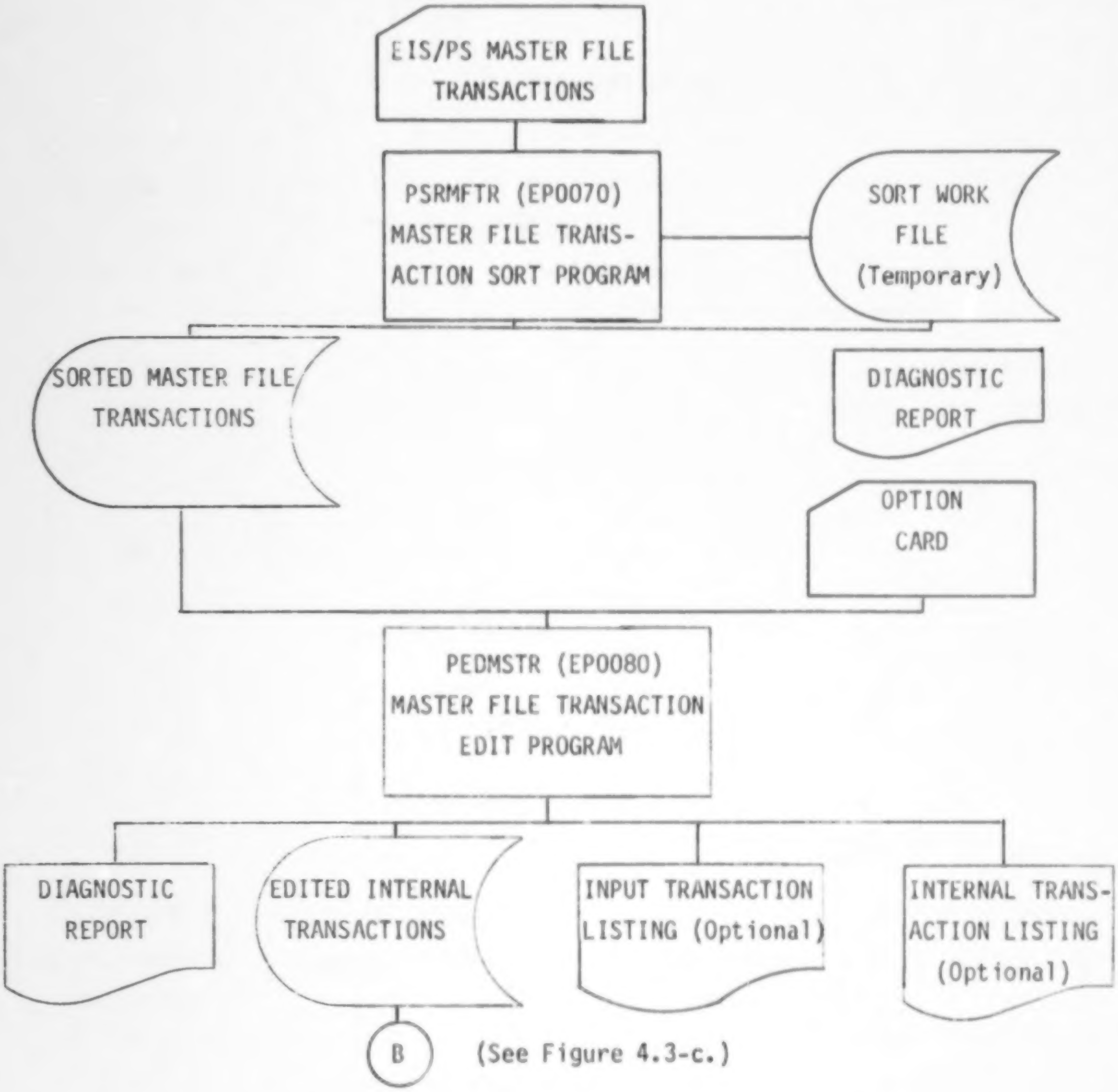
Emission factor information is inserted into the internal transactions produced by either PEDMSTR (EP0060) or PCENETR (EP0080). The internal transactions must first be sorted by the master file internal transaction pre-insertion sort program, PSREFIN (EP0090). The sorted transactions are then passed to the master file internal transaction emission factor insertion program, PMSEFIN (EP0100). See Figure 4.3-c for a flowchart illustrating the master file internal transaction emission factor insertion.

After the emission factor insertion has been performed, or if no insertion is to be performed, the internal transactions must be sorted by the master file internal transaction sort program, PSRINTR (EP0110). The sorted internal transactions are then input to the master file maintenance program, PFMMSTR (EP0120), to create or up-date the EIS/PS master file. No old master file is input to PFMMSTR (EP0120) when the initial file is being created; however, when an existing file is being updated, that file is input to PFMMSTR (EP0120). See Figure 4.3.d for a flowchart illustrating the master file mainte-nance procedure.

The master file emission factor transaction generator program, PMSEFGN (EP0130), is used to update the emission factor information in the EIS/PS master file after updating the emission factor file. The master file and the emission factor file are compared, and internal transactions are created. The updated emission factor information is inserted in these transactions, using PSREFIN (EP0090) and PMSEFIN (EP0100). The completed transactions are then used to update the master file. See Figure 4.3-e for a flowchart illustrating master file emission factor transaction generation.

Detailed discussion of these programs can be found in the follow-ing sections: 4.3.2, PSRNETR (EP0050); 4.3.3, PCENETR (EP0060); 4.3.4, PSRMFTR (EP0070); 4.3.5, PEDMSTR (EP0080); 4.3.6, PSREFIN (EP0090); 4.3.7, PMSEFIN (EP0100); 4.3.8, PSRINTR (EP0110); 4.3.9, PFMMSTR (EP0120); and 4.3.10, PMSEFGN (EP0130).

PSRNETR (EP0050) and PCENETR (EP0060) are executed by the cataloged procedure EPCET10, which is discussed in Section 4.3.3.5; PSRMFTR (EP0070) and PEDMSTR (EP0080) by EPEDT10, discussed in Section 4.3.5.5; PSREFIN (EP0090) and PMSEFIN (EP0100) by EPMST10, discussed in Section 4.3.7.5; PSRINTR (EP0110) and PFMMSTR (EP0120) by EPFMM10, discussed in Section 4.3.9.5; and PMSEFGN (EP0130) by EPMSM10, discussed in Section 4.3.10.5. Other cataloged procedures for creating or updating the master file are discussed in Section 4.4



EIS/PS MASTER FILE TRANSACTIONS
PSRMFTR (EP0070) MASTER FILE TRANS-ACTION SORT PROGRAM
SORT WORK FILE (Temporary)
SORTED MASTER FILE TRANSACTIONS
DIAGNOSTIC REPORT
OPTION CARD
PEDMSTR (EP0080) MASTER FILE TRANSACTION EDIT PROGRAM
DIAGNOSTIC REPORT
EDITED INTERNAL TRANSACTIONS
INPUT TRANSACTION LISTING (Optional)
INTERNAL TRANS-ACTION LISTING (Optional)
B

(See Figure 4.3-c.)

Figure 4.3-a. EIS/PS Master File Transaction Edit Flowchart

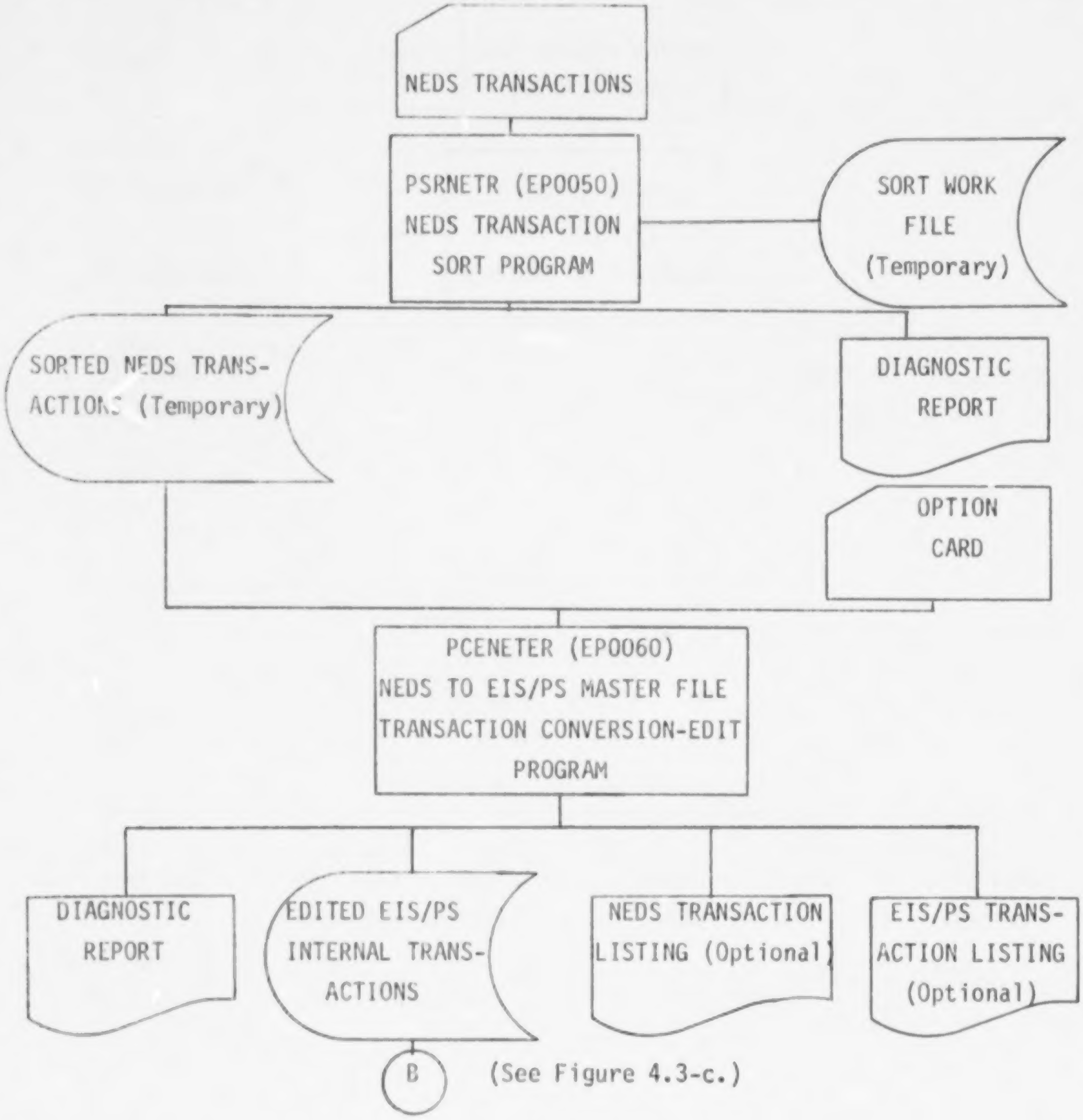
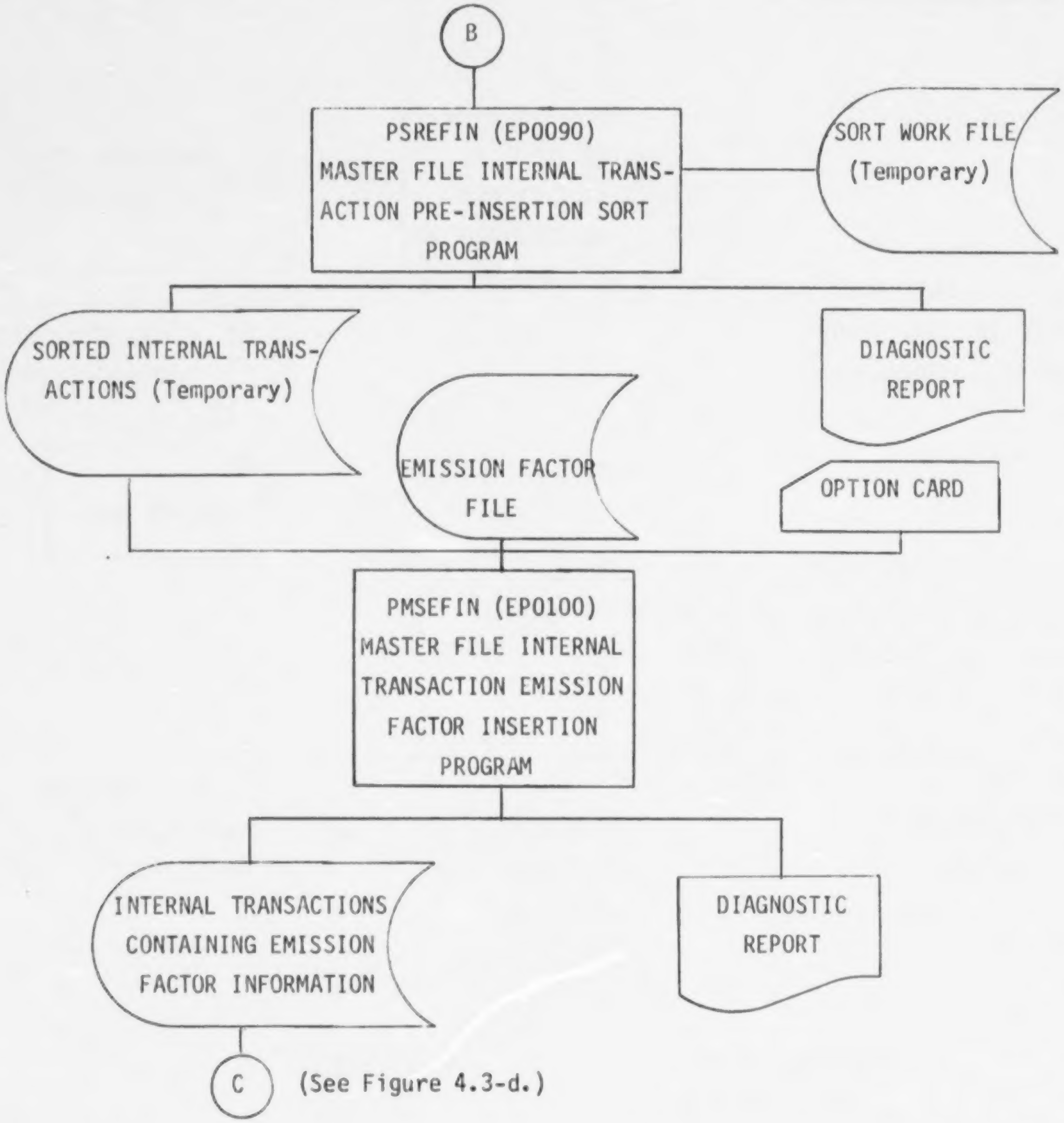

NEDS TRANSACTIONS
PSRNETR (EP0050) NEDS TRANSACTION SORT PROGRAM
SORT WORK FILE (Temporary)
SORTED NEDS TRANS-ACTIONS (Temporary)
DIAGNOSTIC REPORT
OPTION CARD
PCENETER (EP0060) NEDS TO EIS/PS MASTER FILE TRANSACTION CONVERSION-EDIT PROGRAM
DIAGNOSTIC REPORT
EDITED EIS/PS INTERNAL TRANS-ACTIONS
NEDS TRANSACTION LISTING (Optional)
EIS/PS TRANS-ACTION LISTING (Optional)
B
(See Figure 4.3-c.)

Figure 4.3-b. NEDS to EIS/PS Master File Transaction Conversion-Edit Flowchart



B
PSREFIN (EP0090)
MASTER FILE INTERNAL TRANSACTION PRE-INSERTION SORT PROGRAM
SORT WORK FILE (Temporary)
SORTED INTERNAL TRANSACTIONS (Temporary)
DIAGNOSTIC REPORT
EMISSION FACTOR FILE
OPTION CARD
PMSEFIN (EP0100)
MASTER FILE INTERNAL TRANSACTION EMISSION FACTOR INSERTION PROGRAM
INTERNAL TRANSACTIONS CONTAINING EMISSION FACTOR INFORMATION
DIAGNOSTIC REPORT
C
(See Figure 4.3-d.)

Figure 4.3-c. Master File Internal Transaction Emission Factor Insertion Flowchart

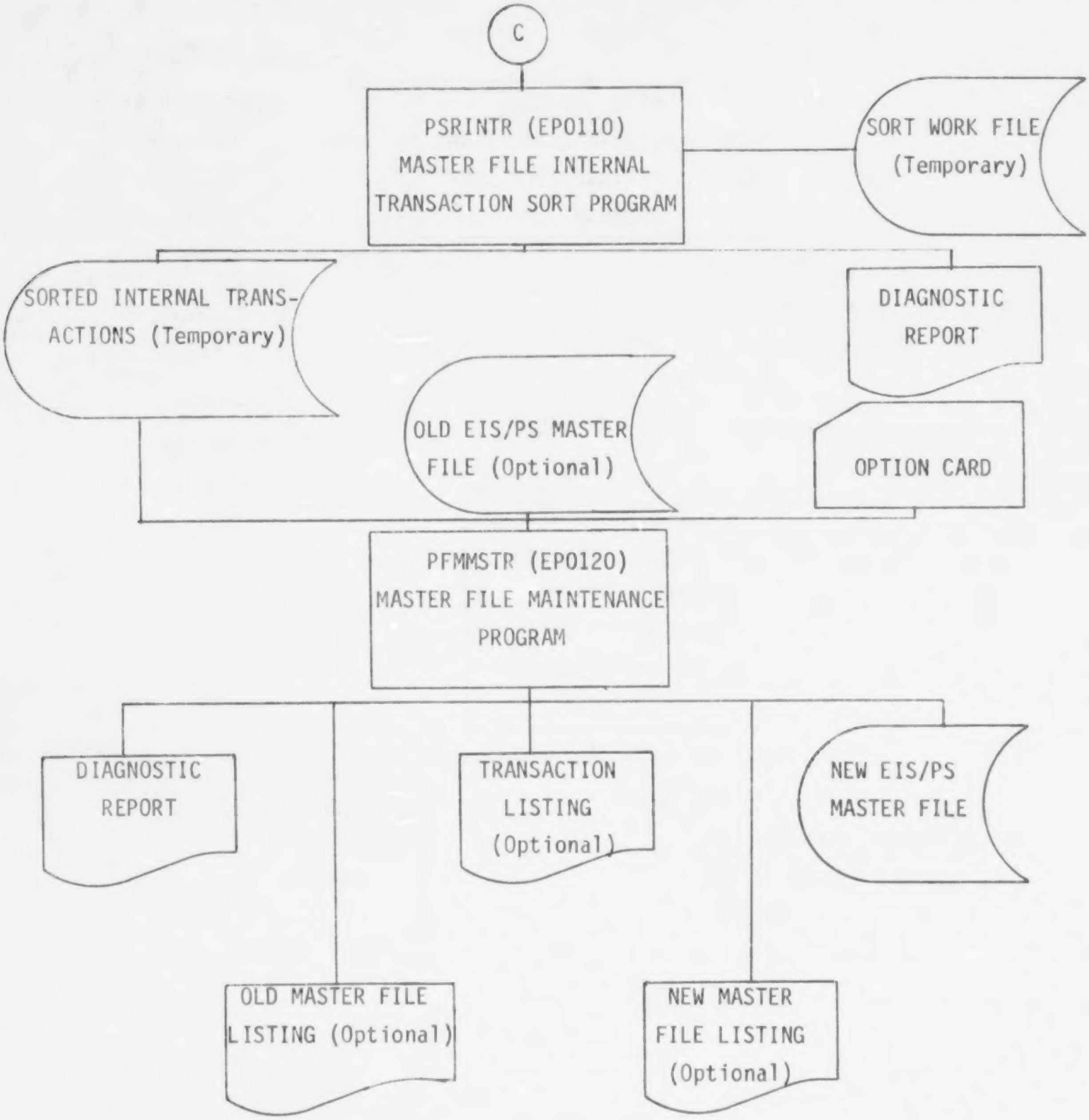


Figure 4.3-d. EIS/PS Master File Maintenance Flowchart

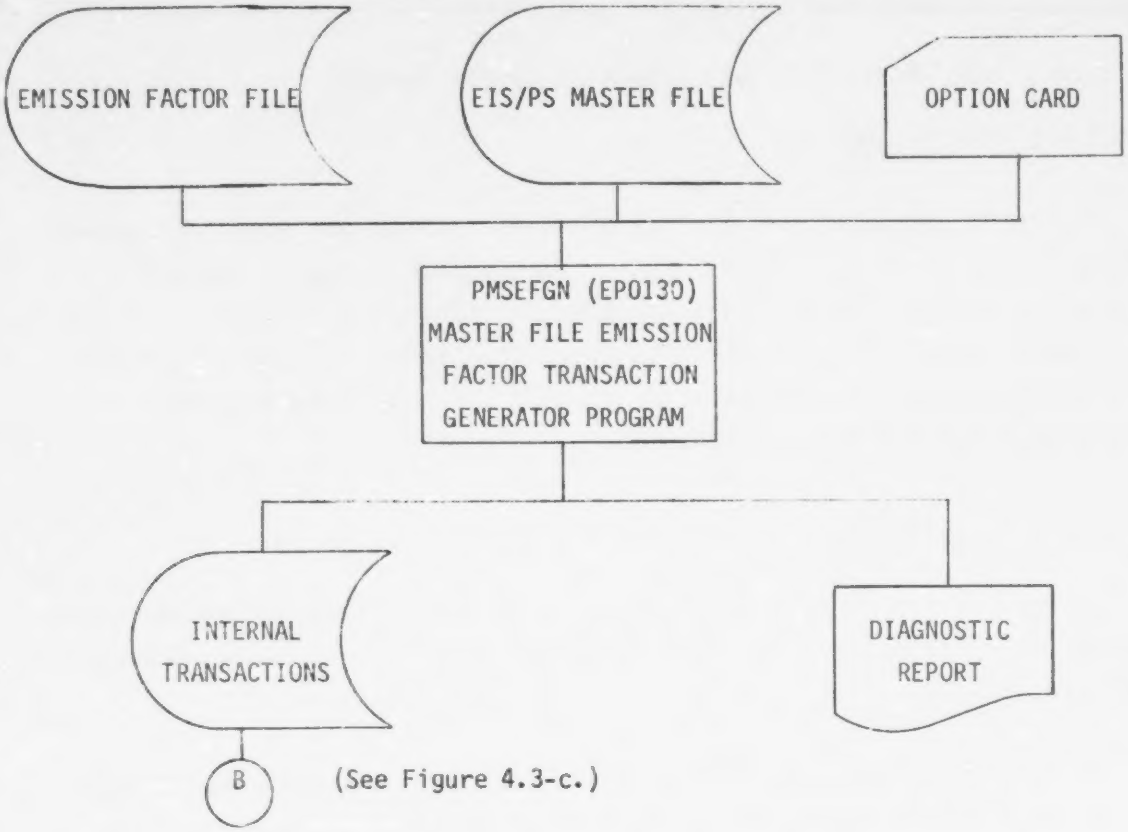


Figure 4.3-e. Master File Emission Factor Transaction Generator Flowchart

4.3.2. NEDS TRANSACTION SORT PROGRAM - PSRNETR (EP0050)

4.3.2.1 Description

PSRNETR (EP0050) sorts NEDS point source transactions into the sequence required by the NEDS to EIS/PS master file transaction conversion-edit program, PCENETR (EP0060); Figure 4.3.2-a details this sort order. All NEDS transactions must be sorted by PSRNETR (EP0050) before they can be converted to EIS/PS master file transactions. See Section 4.3.3 for additional information on the NEDS transactions.

4.3.2.2 File Formats

Input to this program consists solely of NEDS point source transactions. Refer to Figure 4.3.3-a for a description of the NEDS point source transaction formats.

PSRNETR (EP0050) produces two output files: a diagnostic report and a temporary file containing the sorted NEDS point source transactions. The sorted transactions are in the correct sequence for use as input to the NEDS to EIS/PS master file transaction conversion-edit program, PCENETR (EP0060). An example of the diagnostic report is shown in Figure 4.3.2-b.

4.3.2.3 Options and Control Cards

There are no options.

4.3.2.4 Error Messages

There are no error messages.

4.3.2.5 Cataloged JCL

PSRNETR (EP0050) should always be executed in conjunction with the NEDS to EIS/PS master file transaction conversion-edit program, PCENETR (EP0060). See Section 4.3.3.5 for a discussion of the cataloged procedure PECET10, which executes both programs.

4.3.2.6 Warnings and Special Instructions

Note that the COBOL sort verb is used in this program; therefore, the collating sequence for alphanumeric fields is determined by the computer at the user's particular installation.

In addition to the diagnostic report produced by PSRNETR (EP0050), messages generated by the sort-merge package will be printed. The format and content, as well as the physical location, of these messages depend upon the user's particular installation.

4.3.2.7 Cost Considerations

The following estimates are for the execution of PSRNETR (EP0050) on an IBM 370/168:

Number of NEDS master file transactions:	322 transactions
CPU time:	1.11 seconds
I/O time:	1.63 seconds
Total time:	2.74 seconds
Estimated cost:	$.38

4.3.2.8 Related Programs and Procedures

PSRNETR (EP0050) should always be executed in conjunction with the NEDS to EIS/PS master file transaction conversion-edit program, PCENETR (EP0060). The cataloged procedure EPCET10 executes both programs.

Also, PSRNETR (EP0050) and PCENETR (EP0060) can be executed in conjunction with the master file internal transaction pre-insertion sort program, PSREFIN (EP0090); the master file internal transaction emission factor insertion program, PMSEFIN (EP0100); the master file internal transaction sort program, PSRINTR (EP0110); and the master file maintenance program, PFMMSTR (EP0120), by the cataloged procedure EPFMM20.

Record Position	Description	Sort Sequence
1 - 2	State	Ascending
3 - 6	County	Ascending
7 - 9	AQCR	Ascending
10 - 13	Plant ID	Ascending
14 - 15	Point ID	Ascending
18 - 25	SCC	Ascending
80	Card Number	Ascending
78	Action Code	Ascending

Figure 4.3.2-a. Sort Sequence for NEDS Point Source Transactions

```
                    EIS/PS NEDS TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE     1

 PROGRAM NAME: PSRNETR (EP0050)
 REVISION LEVEL: 1-00
 LAST UPDATE #: P-1
 DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF INPUT TRANSACTIONS:      322
NUMBER OF OUTPUT TRANSACTIONS:      322
```

Figure 4.3.2-b. Diagnostic Report

4.3.3 NEDS TO EIS/PS MASTER FILE TRANSACTION CONVERSION-EDIT PROGRAM PCENETR (EP0060)

4.3.3.1 Description

The EIS/PS master file can be created and updated using NEDS point source transactions. The NEDS transactions are sorted by PSRNETR (EP0050) and are edited and converted into EIS/PS internal transactions by PCENETR (EP0060). The internal transactions can then be sorted by PSREFIN (EP0090) and input to the master file internal transaction emission factor insertion program, PMSEFIN (EP0100). The internal transactions can also be sorted by PSRINTR (EP0110) and input to the master file maintenance program, PFMMSTR (EP0120).

The NEDS point source transactions include the P1 through P7 cards; refer to Figure 4.3.3-a for the formats of these cards. All data fields from the NEDS transactions are included in the EIS/PS master file. Plant, point, and SCC records can be added, changed, or deleted using NEDS transactions. Comment records do not correspond to any NEDS information and cannot be processed using NEDS transactions. (Note, the NEDS P7 comments are contained as fields in the other EIS/PS transactions). Each NEDS transaction is processed separately. The sort prior to executing PCENETR (EP0060) insures that plant groups will be processed and printed together if errors occur or if listings are requested.

All NEDS transactions are edited for valid state, county, AQCR, plant ID, action code, P-type card, and card number. If any of these fields are in error, the transaction is rejected; i.e., the entire card is rejected, and no EIS/PS internal transactions will be created from the NEDS transaction. All other NEDS fields are edited and, if flagged as errors, the entire card is rejected. If flagged as conditionals, the data is accepted, and a message is printed in the diagnostic report.

The state, county, AQCR, plant ID, and action code fields of all valid NEDS transactions are converted to the respective fields of any EIS/PS transactions generated. Fields not contained in the NEDS cards are blank. In addition, individual fields (when nonblank) are converted as follows:

NEDS P1 Card: The year and a generated day of 000 are output on all transactions generated. City, UTM-zone, contact, and ownership code are output on an 01 card. Name and address are output on an 02 card. For an add transaction, an 03 card is generated with a blank mailing address.

The NEDS P2 through P5 cards are used to generate the 11, 12, and 13 internal transactions. As each NEDS card is read, the fields from that card are moved to the EIS/PS transactions, but no transactions are written until all the cards for a given NEDS point ID are processed. All transactions generated will contain the NEDS point ID. In addition, the following fields are converted:

NEDS P2 Card: SIC, IPP, and UTM coordinates are output on the 11 transaction. The stack information is output on the 12 transaction.

NEDS P3 Card: Boiler design is output on the 11 transaction. Control equipment and estimated control device efficiency are output on five 13 transactions (one for each of the five criteria pollutants).

NEDS P4 Card: Throughput, operating rate, and space heat are output on the 11 transaction. Emissions estimate and estimation method are output on five 13 transactions (one for each of the five criteria pollutants.

NEDS P5 Card: Compliance information, ECAP, and control regulations are output on the 12 transaction. Allowable emissions are output on five 13 transactions (one for each of the five criteria pollutants).

NEDS P6 Card: NEDS point ID and SCC are output on all generated transactions. An SCC sequence number of 00 is always used. Fuel process rate, maximum design rate, ash and sulfur contents, and heat contents are output on the 21 transaction. Source code, source description, and confidentiality are output on the 22 transaction. For an add transaction, a 23 transaction with a zero pollutant ID is used. This 23 transaction is used in the master file internal transaction emission factor insertion program, PMSEFIN (EP0100), to signal that a 23 transaction is to be generated for each pollutant in the emission facator file for that SCC.

NEDS P7 Card: If the point ID and SCC are blank, an 04 transaction is generated containing the P7 comment. If only the SCC is blank, a 14 transaction is generated with the P7 comment. Otherwise, a 24 transaction and a 25 transaction are output containing, respectively, the left and right sections of the comment.

4.3.2.2 File Formats

PCENETR (EP0060) uses two input files: the NEDS transaction file and an option card. See Figure 4.3.3-a for the NEDS transaction formats. Description of the NEDS point source fields and instructions for coding the forms can be found in AEROS Manual Series, Volume II: AEROS User's Manual, Section 3.1.2. A discussion of the option card can be found in the following section of this manual.

PCENETR (EP0060) produces a diagnostic report and a file containing EIS/PS internal transactions. The output internal transactions are in the format required for input to the master file internal transaction emission factor insertion program, PMSEFIN (EP0100) and the master file maintenance program, PFMMSTR (EP0120). Note that the internal transactions must be sorted prior to running either of these programs. Figure 4.3.5-c illustrates the format of the internal transactions.

The diagnostic report consists of a listing of NEDS transactions containing one or more invalid fields. Each invalid field is underlined with a B under the beginning character and an E under the ending character. In addition, a message is printed for each invalid field to give a brief description of the error. Warning messages are not printed in the report unless the user requests so on the option card. The diagnostic report also lists the update messages as well as summary statistics giving the options in effect, the number of NEDS transactions, the number of output internal transactions, and the number of errors detected. See Figure 4.3.3-b for an example of the diagnostic report.

PCENETR (EP0060) produces two optional listings: a listing of all input NEDS transactions and a listing of all output internal transactions. These listings must be requested using the option card as described in the following section. See Figures 4.3.3-c and 4.3.3-d for examples of the NEDS transaction listing and the internal transaction listing, respectively.

4.3.2.3 Options and Control Cards

An option card must be entered into PCENETR (EP0060). Failure to enter the card will cause program execution to be terminated prematurely. There are three fields on the option card: a date, a FLAGW option, and a LIST option. The format of the option card is shown in Figure 4.3.3-e.

The date field is required. If this field is not present or if it is not numeric, the program will be aborted. A year is entered into the date field and is used to edit the year field in the NEDS transactions (the transaction year must not be greater than the option card year).

The FLAGW option is used to indicate that warning messages should be printed in the diagnostic report. Warning messages are used to indicate that data was accepted but that the data might be questionable. A value of FLAGW in the field is required if warning messages are to be printed. The field should be left blank if the warning messages are not to be printed.

The LIST option is used to indicate that listings of the input NEDS transactions and of the output internal transactions should be produced. Examples of these listings are shown in Figures 4.3.3-c and 4.3.3-d. A value of LIST in the field is required to produce both listings. The field should be left blank if no listing are desired.

4.3.3.4 Error Messages

PCENETR 001 ERROR - COLUMN 01 - INVALID STATE CODE, CARD REJECTED
Meaning: The valid state codes are 01-55.
Action: Correct and resubmit the transaction.

PCENETR 002 ERROR - COLUMN 03 - NON-NUMERIC COUNTY CODE, CARD REJECTED
Meaning: The field must be numeric.
Action: Correct and resubmit the transaction.

PCENETR 003 ERROR - COLUMN 07 - INVALID AQCR CODE, CARD REJECTED
Meaning: The valid AQCR codes are 001-247.
Action: Correct and resubmit the transaction.

PCENETR 004 ERROR - COLUMN 79 - INVALID ACTION TYPE, CARD REJECTED

Meaning: Valid action types are A (add), D (delete), and C (change).

Action: Correct and resubmit the transaction.

PCENETR 005 ERROR - COLUMN 78 - INVALID CARD TYPE, CARD REJECTED

Meaning: Valid card type is P (point source)

Action: Correct and resubmit the transaction.

PCENETR 006 ERROR - COLUMN 80 - INVALID CARD NUMBER, CARD REJECTED

Meaning: The valid card numbers are 1-7.

Action: Correct and resubmit the transaction.

PCENETR 007 ERROR - COLUMN 10 - INVALID PLANT ID, CARD REJECTED

Meaning: The plant ID must contain only numbers and letters; blanks cannot be included.

Action: Correct and resubmit the transaction.

PCENETR 008 - CONDITIONAL - COLUMN 18 - UTM-ZONE BLANK FOR ADD TRANSACTION

Meaning: The UTM zone should be coded for an add transaction; however, failure to code it does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 009 CONDITIONAL - COLUMN 18 - UTM ZONE OUT OF RANGE

Meaning: Valid UTM zones can be found in Appendix A, Table A-1; however, an invalid range does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 010 CONDITIONAL - COLUMN 20 - INVALID YEAR

Meaning: The year must be numeric and must not be greater than the option card date; however, an invalid year does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 011 ERROR - COLUMN 22 - NAME/ADDRESS FIELD BLANK FOR ADD TRANSACTION, CARD REJECTED

Meaning: The field is required for an add transaction.

Action: Correct and resubmit the transaction.

PCENETR 012 CONDITIONAL - COLUMN 74 - INVALID OWNERSHIP CODE

Meaning: The valid codes are P, F, S, L, and U; however, an invalid code does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 013 CONDITIONAL - COLUMN 16 - INVALID YEAR

Meaning: The year must be numeric and must not be greater than the option card date; however, an invalid year does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 014 ERROR - COLUMN 14 - INVALID POINT ID, CARD REJECTED

Meaning: The point ID can contain numbers or letters; blanks cannot be included.

Action: Correct and resubmit the transaction.

PCENETR 015 CONDITIONAL - COLUMN 24 - UTM-HORIZONTAL COORDINATE BLANK FOR ADD TRANSACTION

Meaning: A UTM horizontal coordinate should be coded for an add transaction; however, a blank coordinate does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 016 CONDITIONAL - COLUMN 24 - UTM-HORIZONTAL COORDINATE OUT OF RANGE

Meaning: Valid UTM coordinates are given in Appendix A, Table A-1; however, an invalid coordinate does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 017 CONDITIONAL - COLUMN 28 - UTM VERTICAL COORDINATE BLANK FOR ADD TRANSACTION

Meaning: A UTM vertical coordinate should be coded for an add transaction; however, a blank coordinate does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 018 CONDITIONAL - COLUMN 28 - UTM-VERTICAL COORDINATE OUT OF RANGE

Meaning: Valid UTM coordinates are given in Appendix A, Table A-1; however, an invalid coordinate does not cause the transaction to be rejected.

Action: The field can be corrected and the job resumitted, or the master file record can be updated later using a change transaction.

PCENETR 019 CONDITIONAL - COLUMN 33 - STACK HEIGHT LESS THAN 0 OR GREATER THAN 500

Meaning: The stack height is not in the range of 0 to 500 feet; however, an out-of-range value does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 020 ERROR - COLUMN 33 - NON-NUMERIC STACK HEIGHT, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 021 CONDITIONAL - COLUMN 37 - STACK DIAMETER EXCEEDS (0.2 * STACK HEIGHT

Meaning: The stack diameter exceeds 0.2 times the stack height; however, an invalid stack diameter does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 022 ERROR - COLUMN 37 - NON-NUMERIC STACK DIAMETER, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 023 CONDITIONAL - COLUMN 40 - INVALID STACK TEMPERATURE

Meaning: The stack temperature is outside the range of 77° to 2000° Fahrenheit; however, an out-of-range temperature does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 024 ERROR - COLUMN 40 - NON-NUMERIC STACK TEMPERATURE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 025 ERROR - COLUMN 44 - NON-NUMERIC EXHAUST FLOW RATE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 026 CONDITIONAL - COLUMN 51 - INVALID PLUME HEIGHT

Meaning: The plume height is not in the range of 0 to 200 feet; however, an out-of-range plume height does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 027 ERROR - COLUMN 51 - NON-NUMERIC PLUME HEIGHT, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 028 ERROR - COLUMN 18 - NON-NUMERIC BOILER DESIGN CAPACITY, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 029 CONDITIONAL - COLUMN 26 - INVALID DAY FOR OPERATING RATE

Meaning: The valid hours per day are 00-24; however, an invalid value does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 030 ERROR - COLUMN 26 - NON-NUMERIC DAY FOR OPERATING RATE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 031 CONDITIONAL - COLUMN 28 - INVALID WEEK FOR OPERATING RATE

Meaning: The valid days per week are 0-7; however, an invalid value does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 032 ERROR - COLUMN 28 - NON-NUMERIC WEEK FOR OPERATING RATE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 033 CONDITIONAL - COLUMN 29 - INVALID YEAR FOR OPERATING RATE

Meaning: The valid weeks per year are 00-52; however, an invalid value does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 034 ERROR - COLUMN 29 - NON-NUMERIC YEAR FOR OPERATING RATE, CARD REJECTED

Meaning: This field must be numeric.
Action: Correct and resubmit the transaction.

PCENETR 035 ERROR - COLUMN 71 - NON-NUMERIC HEATED SPACE PERCENTAGE, CARD REJECTED

Meaning: This field must be numeric.
Action: Correct and resubmit the transaction.

PCENETR 036 CONDITIONAL - COLUMN 51 - SOURCE DESCRIPTION BLANK FOR ADD TRANSACTION

Meaning: SCC's ending in 97, 98, or 99 require a non-blank source description for an add transaction; however, a blank source description does not cause the transaction to be rejected.
Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 037 CONDITIONAL - COLUMN 64 - INVALID ECAP CODE

Meaning: The valid ECAP codes are 0, 1, 2, and blank; however, an invalid code does not cause the transaction to be rejected.
Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 038 ERROR - COLUMN 64 - NON-NUMERIC ECAP CODE, CARD REJECTED

Meaning: This field must be numeric.
Action: Correct and resubmit the transaction.

PCENETR 039 CONDITIONAL - COLUMN 53 - INVALID COMPLIANCE STATUS

Meaning: The only valid values for the compliance status are 1-4; however, an invalid value does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 040 ERROR - COLUMN 53 - NON-NUMERIC COMPLIANCE STATUS, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 041 CONDITIONAL - COLUMN 56 - COMMON STACK POINTS NOT BOTH BLANK FOR ADD TRANSACTION

Meaning: One of the two points is blank and the other is non-blank; however, this inconsistency does not cause the transaction to be rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 042 CONDITIONAL - COLUMN 56 - 1ST COMMON STACK PT NOT LESS THAN 2ND COMMON STACK PT

Meaning: The first point is not less than the second point; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 043 CONDITIONAL - COLUMN 14 - NEDS POINT ID NOT WITHIN COMMON STACK POINTS

Meaning: The NEDS point ID does not fall within the two points specified with common stack; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 044 CONDITIONAL - COLUMN 18 - INVALID THRUPUT PERCENTAGE SUM

Meaning: The thruput percentage should sum to 100%; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 045 ERROR - COLUMN 18 - NON-NUMERIC THRUPUT PERCENTAGE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 046 ERROR - COLUMN 66 - TSP ESTIMATION METHOD IS INVALID, CARD REJECTED

Meaning: The valid estimation methods are 0-7 or blank.

Action: Correct and resubmit the transaction.

PCENETR 047 ERROR - COLUMN 67 - SO2 ESTIMATION METHOD IS INVALID, CARD REJECTED

Meaning: The valid estimation methods are 0-7 or blank.

Action: Correct and resubmit the transaction.

PCENETR 048 ERROR - COLUMN 68 - NOX ESTIMATION METHOD IS INVALID, CARD REJECTED

Meaning: The valid estimation methods are 0-7 or blank.
Action: Correct and resubmit the transaction.

PCENETR 049 ERROR - COLUMN 69 - HC ESTIMATION METHOD IS INVALID, CARD REJECTED

Meaning: The valid estimation methods are 0-7 and blank.
Action: Correct and resubmit the transaction.

PCENETR 050 ERROR - COLUMN 70 - CO ESTIMATION METHOD IS INVALID, CARD REJECTED

Meaning: The valid estimation methods are 0-7 and blank.
Action: Correct and resubmit the transaction.

PCENETR 051 ERROR - COLUMN 31 - TSP EMISSIONS ESTIMATE IS BLANK, CARD REJECTED

Meaning: An emissions estimate is required for methods 1, 2, 4, and 5.
Action: Correct and resubmit the transaction.

PCENETR 052 ERROR - COLUMN 38 - SO2 EMISSIONS ESTIMATE IS BLANK, CARD REJECTED

Meaning: An emissions estimate is required for methods 1, 2, 4, and 5.
Action: Correct and resubmit the transaction.

PCENETR 053 ERROR - COLUMN 45 - NOX EMISSIONS ESTIMATE IS BLANK, CARD REJECTED

Meaning: An emissions estimate is required for methods 1, 2, 4, and 5.
Action: Correct and resubmit the transaction.

PCENETR 054 ERROR - COLUMN 52 - HC EMISSIONS ESTIMATE IS BLANK, CARD REJECTED

Meaning: An emissions estimate is required for methods 1, 2, 4, and 5.
Action: Correct and resubmit the transaction.

PCENETR 055 ERROR - COLUMN 59 - CO EMISSIONS ESTIMATE IS BLANK, CARD REJECTED

Meaning: An emissions estimate is required for methods 1, 2, 4, and 5.
Action: Correct and resubmit the transaction.

PCENETR 056 ERROR - COLUMN 31 - TSP EMISSIONS ESTIMATE INVALID, CARD REJECTED
Meaning: The emissions estimate is greater than 800,000.
Action: Correct and resubmit the transaction.

PCENETR 057 ERROR - COLUMN 38 - SO2 EMISSIONS ESTIMATE INVALID, CARD REJECTED
Meaning: The emissions estimate is greater than 800,000.
Action: Correct and resubmit the transaction.

PCENETR 058 ERROR - COLUMN 45 - NOX EMISSIONS ESTIMATE INVALID, CARD REJECTED
Meaning: The emissions estimate is greater than 800,000.
Action: Correct and resubmit the transaction.

PCENETR 059 ERROR - COLUMN 52 - HC EMISSIONS ESTIMATE INVALID, CARD REJECTED
Meaning: The emissions estimate is greater than 800,000.
Action: Correct and resubmit the transaction.

PCENETR 060 ERROR - COLUMN 59 - CO EMISSIONS ESTIMATE INVALID, CARD REJECTED
Meaning: The emissions estimate is greater than 800,000.
Action: Correct and resubmit the transaction.

PCENETR 061 CONDITIONAL - COLUMN 31 - TSP EMISSIONS ESTIMATE OUT OF RANGE
Meaning: The emissions estimate is between 25,000 and 800,000; however, the transaction was not rejected.
Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 062 CONDITIONAL - COLUMN 38 - SO2 EMISSIONS ESTIMATE OUT OF RANGE
Meaning: The emissions estimate is between 25,000 and 800,000; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 063 CONDITIONAL - COLUMN 45 - NOX EMISSIONS ESTIMATE OUT OF RANGE

Meaning: The emissions estimate is between 25,000 and 800,000; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 064 CONDITIONAL - COLUMN 52 - HC EMISSIONS ESTIMATE OUT OF RANGE

Meaning: The emissions estimate is between 25,000 and 800,000; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 065 CONDITIONAL - COLUMN 59 - CO EMISSIONS ESTIMATE OUT OF RANGE

Meaning: The emissions estimate is between 25,000 and 800,000; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 066 CONDITIONAL - COLUMN 18 - TSP ALLOWABLE EMISSIONS OUT OF RANGE

Meaning: The allowable emissions were greater than 25,000; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 067 CONDITIONAL - COLUMN 25 - SO2 ALLOWABLE EMISSIONS OUT OF RANGE

Meaning: The allowable emissions were greater than 25,000; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 068 CONDITIONAL - COLUMN 32 - NOX ALLOWABLE EMISSIONS OUT OF RANGE

Meaning: The allowable emissions were greater than 25,000; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 069 CONDITIONAL - COLUMN 39 - HC ALLOWABLE EMISSIONS OUT OF RANGE

Meaning: The allowable emissions were greater than 25,000; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 070 CONDITIONAL - COLUMN 46 - CO ALLOWABLE EMISSIONS OUT OF RANGE

Meaning: The allowable emissions were greater than 25,000; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 071 ERROR - COLUMN 18 - TSP ALLOWABLE EMISSIONS NON-NUMERIC, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 072 ERROR - COLUMN 25 - SO2 ALLOWABLE EMISSIONS NON-NUMERIC, CARD REJECTED

Meaning: This field must be numeric.
Action: Correct and resubmit the transaction.

PCENETR 073 ERROR - COLUMN 32 - NOX ALLOWABLE EMISSIONS NON-NUMERIC, CARD REJECTED

Meaning: This field must be numeric.
Action: Correct and resubmit the transaction.

PCENETR 074 ERROR - COLUMN 39 - HC ALLOWABLE EMISSIONS NON-NUMERIC, CARD REJECTED

Meaning: This field must be numeric.
Action: Correct and resubmit the transaction.

PCENETR 075 ERROR - COLUMN 46 - CO ALLOWABLE EMISSIONS NON-NUMERIC, CARD REJECTED

Meaning: This field must be numeric.
Action: Correct and resubmit the transaction.

PCENETR 076 ERROR - COLUMN 72 - CONFIDENTIALITY OF 3 NOT ALLOWED, CARD REJECTED

Meaning: The valid confidentiality codes are 1 and 2; 3 is rejected.
Action: Correct and resubmit the transaction.

PCENETR 077 CONDITIONAL - COLUMN 72 - INVALID CONFIDENTIALITY CODE

Meaning: The valid confidentiality codes are 1 and 2; however, the transaction was not rejected.
Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 078 ERROR - COLUMN 26 - NON-NUMERIC FUEL PROCESS RATE, CARD REJECTED

Meaning: This field must be numeric.
Action: Correct and resubmit the transaction.

PCENETR 079 ERROR - COLUMN 33 - NON-NUMERIC MAXIMUM DESIGN CAPACITY, CARD REJECTED

Meaning: This field must be numeric.
Action: Correct and resubmit the transaction.

PCENETR 080 ERROR - COLUMN 58 - INVALID COMPLIANCE UPDATE, CARD REJECTED

Meaning: This field must be numeric, with the month less than 13 and the day less than 32.
Action: Correct and resubmit the transaction.

PCENETR 081 CONDITIONAL - COLUMN 58 - COMPLIANCE UPDATE GREATER THAN CURRENT DATE

Meaning: The year must be greater than the option card year; however, the transaction was not rejected.
Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PCENETR 082 ERROR - COLUMN 54 - INVALID COMPLIANCE SCHEDULE, CARD REJECTED

Meaning: This field must be numeric, with the month less than 13 and the day less than 32.
Action: Correct and resubmit the transaction.

PCENETR 083 CONDITIONAL - COLUMN 54 - COMPLIANCE SCHEDULE NOT WITHIN 5 YEARS

Meaning: The compliance schedule year must not be more than the option year plus 5; however, the transaction was not rejected.
Action: The field can be corrected and the job resubmitted, or the

master file record can be updated later using a change transaction.

PCENETR 084 ERROR - COLUMN 28 - NON-NUMERIC UTM VERTICAL, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 085 ERROR - INVALID CHARACTER DETECTED IN BASE 36 CONVERSION ROUTINE, CARD REJECTED

Meaning: In converting a point or plant ID, an invalid character was encountered; only numbers and letters are allowed for these fields.

Action: Correct and resubmit the transaction.

PCENETR 086 ERROR - COLUMN 24 - NON-NUMERIC UTM HORIZONTAL, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 087 ABORT - NO OPTION CARD PRESENT

Meaning: The option card is required.

Action: Include the option card and resubmit the job.

PCENETR 088 ABORT - NON-NUMERIC OPTION CONTROL DATE

Meaning: The date must be numeric.

Action: Correct the option card and resubmit the job.

PCENETR 089 CONDITIONAL - INVALID FLAGW OPTION, DEFAULT (NOFLAGW) ASSUMED

Meaning: The values allowed for the option are FLAGW and blank; the default of no FLAGW was used.

Action: No action need be taken unless the warning messages are required; in that case, correct the option card and resubmit the job.

PCENETR 090 CONDITIONAL - INVALID LIST OPTION, DEFAULT (NOLIST) ASSUMED

Meaning: The values allowed for the option are LIST and blank; the default of no LIST was used.

Action: No action need be taken unless listings of the files are required; in that case, correct the option card and resubmit the job.

PCENETR 091 ERROR - COLUMN 18 - NON-NUMERIC SCC CODE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 092 ERROR - COLUMN 18 - UTM ZONE NOT NUMERIC, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 093 ERROR - COLUMN 80 - INVALID CARD NUMBER FOR DELETE, CARD REJECTED

Meaning: Only 1, 2, and 6 cards can have an action code of delete.

Action: Correct and resubmit the transaction.

PCENETR 094 ERROR - COLUMN 56 - INVALID POINTS WITH COMMON STACK, CARD REJECTED

Meaning: The point ID's can contain numbers or letters; blanks cannot be included.

Action: Correct and resubmit the transaction.

PCENETR 095 ERROR - COLUMN 23 - INVALID PRIMARY CONTROL EQUIP FOR TSP, CARD REJECTED

Meaning: Valid control equipment codes can be found in Appendix A, Table A-2.

Action: Correct and resubmit the transaction.

PCENETR 096 ERROR - COLUMN 29 - INVALID PRIMARY CONTROL EQUIP FOR SO2, CARD REJECTED

Meaning: Valid control equipment codes can be found in Appendix A, Table A-2.

Action: Correct and resubmit the transaction.

PCENETR 097 ERROR - COLUMN 35 - INVALID PRIMARY CONTROL EQUIP FOR NOX, CARD REJECTED

Meaning: Valid control equipment codes can be found in Appendix A, Table A-2.

Action: Correct and resubmit the transaction.

PCENETR 098 ERROR - COLUMN 41 - INVALID PRIMARY CONTROL EQUIP FOR HC, CARD REJECTED

Meaning: Valid control equipment codes can be found in Appendix A, Table A-2.

Action: Correct and resubmit the transaction.

PCENETR 099 ERROR - COLUMN 47 - INVALID PRIMARY CONTROL EQUIP FOR CO, CARD REJECTED

Meaning: Valid control equipment codes can be found in Appendix A, Table A-2.

Action: Correct and resubmit the transaction.

PCENETR 100 ERROR - COLUMN 26 - INVALID SECNDRY CONTROL EQUIP FOR TSP, CARD REJECTED

Meaning: Valid control equipment codes can be found in Appendix A, Table A-2.

Action: Correct and resubmit the transaction.

PCENETR 101 ERROR - COLUMN 32 - INVALID SECNDRY CONTROL EQUIP FOR SO2, CARD REJECTED

Meaning: Valid control equipment codes can be found in Appendix A, Table A-2.

Action: Correct and resubmit the transaction.

PCENETR 102 ERROR - COLUMN 38 - INVALID SECNDRY CONTROL EQUIP FOR NOX, CARD REJECTED

Meaning: Valid control equipment codes can be found in Appendix A, Table A-2.

Action: Correct and resubmit the transaction.

PCENETR 103 ERROR - COLUMN 44 - INVALID SECNDRY CONTROL EQUIP FOR HC, CARD REJECTED

Meaning: Valid control equipment codes can be found in Appendix A, Table A-2.

Action: Correct and resubmit the transaction.

PCENETR 104 ERROR - COLUMN 50 - INVALID SECNDRY CONTROL EQUIP FOR CO, CARD REJECTED

Meaning: Valid control equipment codes can be found in Appendix A, Table A-2.

Action: Correct and resubmit the transaction.

PCENETR 105 ERROR - COLUMN 53 - NON-NUMERIC EST CONTROL EFF FOR TSP, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 106 ERROR - COLUMN 56 - NON-NUMERIC EST CONTROL EFF FOR SO2, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 107 ERROR - COLUMN 59 - NON-NUMERIC EST CONTROL EFF FOR NOX, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 108 ERROR - COLUMN 62 - NON-NUMERIC EST CONTROL EFF FOR HC, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 109 ERROR - COLUMN 65 - NON-NUMERIC EST CONTROL EFF FOR CO, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PCENETR 110 ERROR - TSP PRI CONT EQUIP AND EST EFF NOT BOTH BLANK FOR ADD, CARD REJECTED

Meaning: Both or neither of the fields must be blank on an add transaction.

Action: Correct and resubmit the transaction.

PCENETR 111 ERROR - SO2 PRI CONT EQUIP AND EST EFF NOT BOTH BLANK FOR ADD, CARD REJECTED

Meaning: Both or neither of the fields must be blank on an add transaction.

Action: Correct and resubmit the transaction.

PCENETR 112 ERROR - NOX PRI CONT EQUIP AND EST EFF NOT BOTH BLANK FOR ADD, CARD REJECTED

Meaning: Both or neither of the fields must be blank on an add transaction.

Action: Correct and resubmit the transaction.

PCENETR 113 ERROR - HC PRI CONT EQUIP AND EST EFF NOT BOTH BLANK FOR ADD, CARD REJECTED

Meaning: Both or neither of the fields must be blank on an add transaction.

Action: Correct and resubmit the transaction.

PCENETR 114 ERROR - CO PRI CONT EQUIP AND EST EFF NOT BOTH BLANK FOR ADD, CARD REJECTED

Meaning: Both or neither of the fields must be blank on an add transaction.

Action: Correct and resubmit the transaction.

4.3.3.5 Cataloged JCL - EPCET10

4.3.3.5.1 JCL listing - PCENETR (EP0060) can be run by executing the cataloged procedure EPCET10, which also executes the NEDS transaction sort program, PSRNETR (EP0050). See Figure 4.3.3-f for a listing of EPCET10.

4.3.3.5.2 Cross-reference of DD names and files

Program Name: PSRNETR (EP0050)

DD Name	File Description	Input/Output
EPSINPT	NEDS transactions	Input
EPSOUTP	Sorted NEDS transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PCENETR (EP0060)

DD Name	File Description	Input/Output
EPSTRAN	Sorted NEDS transactions	Input
EPSOPTN	Option card	Input
EPSINTR	EIS/PS internal transactions	Output
EPSDIAG	Diagnostic report	Output
EPSTRNL	NEDS transaction listing	Output
EPSINTL	Internal transaction listing	Output

4.3.3.5.3 User-supplied JCL - To execute the cataloged procedure EPCET10, the user must supply the NEDS transactions, an option card, and the data set name for the internal transaction file. See Figure 4.3.3-g for a description of the procedure's substitutable parameters.

4.3.3.5.4 Sample run stream - The following run stream would sort, edit, and convert NEDS transactions. A year of 80 is entered on the option card, and LIST is specified. The default value is used for the internal transaction data set name.

```
// EXEC EPCET10
//SORT.INPUT DD *
Transaction cards
//CONV.OPTIONS DD *
80    LIST
/*
```

4.3.3.6 Warnings and Special Instructions

If the user chooses to ignore CONDITIONAL error messages, places the data in his master file and does not correct the data in a later file maintenance activity; he will receive warning messages for that data from NEDS when it is submitted to NEDS.

4.3.3.7 Cost Considerations

To reduce the cost of running PCENETR (EP0060), use the default options unless the listings are required.

The estimates listed below are based on the execution on an IBM 370/168 of the run stream discussed in Section 4.3.3.5.4:

Number of input NEDS transactions:	322 records
Number of output internal transactions:	576 records
CPU time:	1.12 seconds
I/O time:	2.05 seconds
Total Time:	3.17 seconds
Estimated cost:	$.44

4.3.3.8 Related Programs and Procedures

The cataloged procedure EPFMM20 can be executed to edit and convert NEDS transactions and update the EIS/PS master file. See Section 4.4.4 for a complete discussion of EPFMM20.

NEDS TRANSACTION - P1 CARD

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 17	4	Numeric	City
18 - 19	2	Numeric	UTM Zone
20 - 21	2	Numeric	Year of Record
22 - 61	40	Alphanumeric	Name and Address
62 - 73	12	Alphanumeric	Contact
74	1	Alphabetic	Ownership Code
75 - 77	3		Unused
78	1	Alphabetic	Action Code
79	1	Alphabetic	'P'
80	1	Numeric	Card Number

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Figure 4.3.3-a. NEDS Transaction Formats

NEDS TRANSACTION - P2 CARD

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 15	2	Alphanumeric	Point ID
16 - 17	2	Numeric	Year of Record
18 - 21	4	Numeric	SIC
22 - 23	2	Numeric	IPP
24 - 27	4	Numeric	UTM Horizontal Coordinate
28 - 32	5	Numeric	UTM Vertical Coordinate
33 - 36	4	Numeric	Stack Height
37 - 39	3	Numeric	Stack Diameter
40 - 43	4	Numeric	Stack Temperature
44 - 50	7	Numeric	Exhaust Flow Rate
51 - 54	4	Numeric	Plume Height
55	1		Unused
56 - 59	4	Numeric	Points with Common Stack
60 - 77	18		Unused
78	1	Alphabetic	Action Code
79	1	Alphabetic	'P'
80	1	Numeric	Card Number

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Figure 4.3.3-a - continued. NEDS Transaction Formats

NEDS TRANSACTION - P3 CARD

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 15	2	Alphanumeric	Point ID
16 - 17	2	Numeric	Year of Record
18 - 22	5	Numeric	Boiler Design Capacity
23 - 25	3	Numeric	Primary Control Equipment - TSP
26 - 28	3	Numeric	Secondary Control Equipment - TSP
29 - 31	3	Numeric	Primary Control Equipment - SO_2
32 - 34	3	Numeric	Secondary Control Equipment - SO_2
35 - 37	3	Numeric	Primary Control Equipment - NO_x
38 - 40	3	Numeric	Secondary Control Equipment - NO_x
41 - 43	3	Numeric	Primary Control Equipment - HC
44 - 46	3	Numeric	Secondary Control Equipment - HC
47 - 49	3	Numeric	Primary Control Equipment - CO

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Figure 4.3.3-a - continued. NEDS Transaction Formats

NEDS TRANSACTION - P3 CARD - continued.

Column #	Field Length	Data Type	Description
50 - 52	3	Numeric	Secondary Control Equipment - CO
53 - 55	3	Numeric	Estimated Control Efficiency - TSP
56 - 58	3	Numeric	Estimated Control Efficiency - SO_2
59 - 61	3	Numeric	Estimated Control Efficiency - NO_x
62 - 64	3	Numeric	Estimated Control Efficiency - HC
65 - 67	3	Numeric	Estimated Control Efficiency - CO
68 - 77	10		Unused
78	1	Alphabetic	Action Code
79	1	Alphabetic	'P'
80	1	Numeric	Card Number

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Figure 4.3.3-a - continued. NEDS Transaction Formats

NEDS TRANSACTION - P4 CARD

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 15	2	Alphanumeric	Point ID
16 - 17	2	Numeric	Year of Record
18 - 25	8	Numeric	Percentage Thruput
26 - 30	5	Numeric	Operating Rate
31 - 37	7	Numeric	Emissions Estimate - TSP
38 - 44	7	Numeric	Emissions Estimate - SO_2
45 - 51	7	Numeric	Emissions Estimate - NO_x
52 - 58	7	Numeric	Emissions Estimate - HC
59 - 65	7	Numeric	Emissions Estimate - CO
66	1	Numeric	Estimation Method - TSP
67	1	Numeric	Estimation Method - SO_2
68	1	Numeric	Estimation Method - NO_x
69	1	Numeric	Estimation Method - HC
70	1	Numeric	Estimation Method - CO
71 - 73	3	Numeric	Space Heat
74 - 77	4		Unused
78	1	Alphabetic	Action Code
79	1	Alphabetic	'P'
80	1	Numeric	Card Number

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Figure 4.3.3-a - continued. NEDS Transaction Formats

NEDS TRANSACTION - P5 CARD

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 15	2	Alphanumeric	Point ID
16 - 17	2	Numeric	Year of Record
18 - 24	7	Numeric	Allowable Emission - TSP
25 - 31	7	Numeric	Allowable Emission - SO_2
32 - 38	7	Numeric	Allowable Emission - NO_x
39 - 45	7	Numeric	Allowable Emission - HC
46 - 52	7	Numeric	Allowable Emission - CO
53	1	Numeric	Compliance Status
54 - 57	4	Numeric	Compliance Schedule
58 - 63	6	Numeric	Compliance Update
64	1	Numeric	ECAP
65 - 76	12	Numeric	Control Regulations
77	1		Unused
78	1	Alphabetic	Action Code
79	1	Alphabetic	'P'
80	1	Numeric	Card Number

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Figure 4.3.3-a - continued. NEDS Transaction Formats

NEDS TRANSACTION - P6 CARD

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 15	2	Alphanumeric	Point ID
16 - 17	2	Numeric	Year of Record
18 - 25	8	Numeric	SCC
26 - 32	7	Numeric	Fuel Process Rate
33 - 39	7	Numeric	Maximum Design Rate
40 - 42	3	Numeric	Sulfur Content
43 - 45	3	Numeric	Ash Content
46 - 50	5	Numeric	Heat Content
51 - 70	20	Alphanumeric	Source Description
71	1	Alphabetic	Source Code
72	1	Numeric	Confidentiality
73 - 77	5		Unused
78	1	Alphabetic	Action Code
79	1	Alphabetic	'P'
80	1	Numeric	Card Number

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Figure 4.3.3-a - continued. NEDS Transaction Formats

NEDS TRANSACTION - P7 CARD

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 15	2	Alphanumeric	Point ID
16 - 17	2	Numeric	Year of Record
18 - 25	8	Numeric	SCC
26 - 77	52	Alphanumeric	Comment
78	1	Alphabetic	Action Code
79	1	Alphabetic	'P'
80	1	Numeric	Card Number

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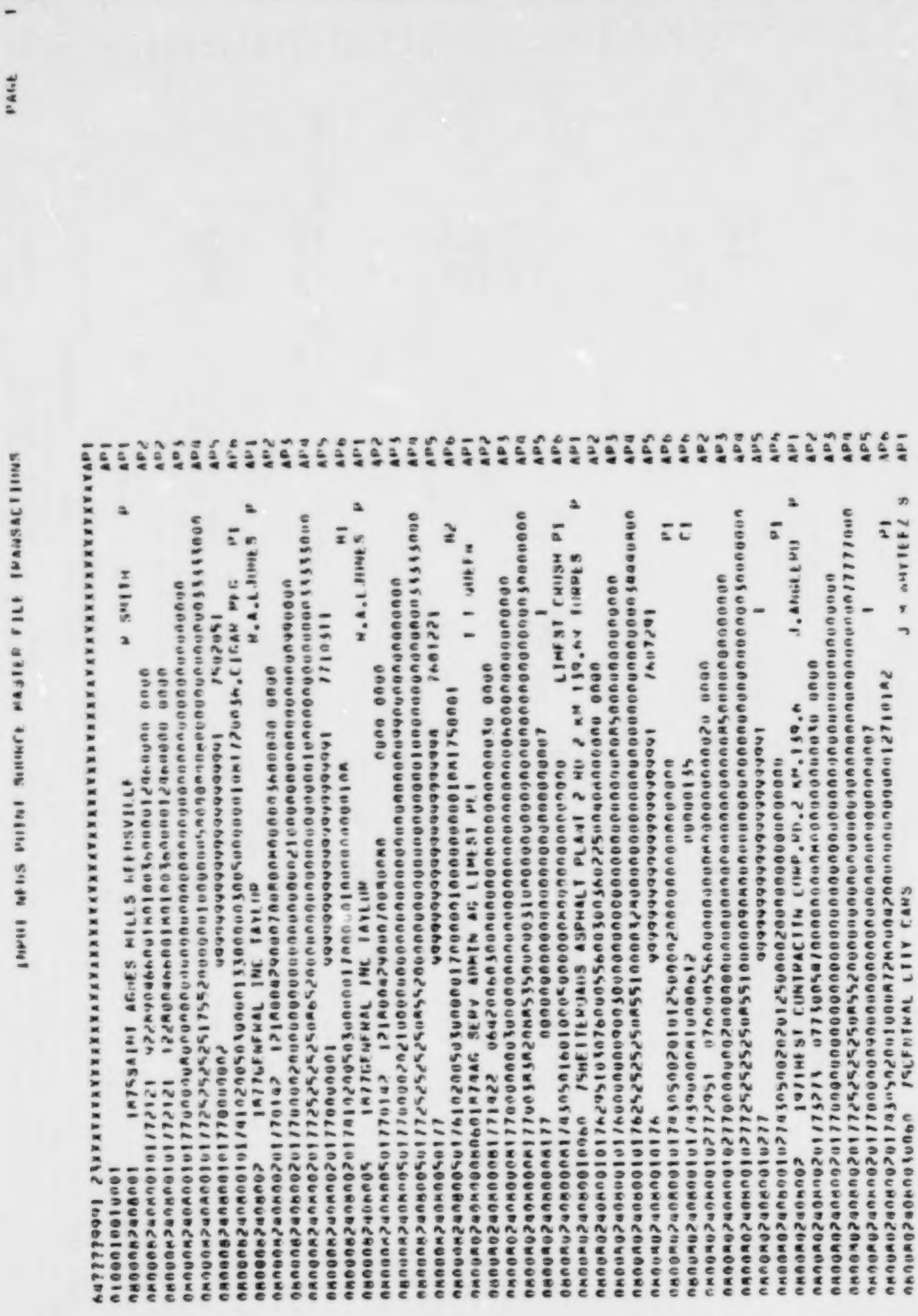
Figure 4.3.3-a - continued. NEDS Transaction Formats

```
                         NEDS TO EIS/PS CONVERSION-EDIT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE    1

PROGRAM NAME: PCENETR (EP0060)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

   CONTROL DATE IS 80    ,  ERROR OPTION IS FLAG  ,  LIST OPTION IS LIST



REB  ER ER  ERE                                                              RRR
          *** PCENETR 001 ERROR - COLUMN 01 - INVALID STATE CODE, CARD REJECTED
          *** PCENETR 002 ERROR - COLUMN 03 - NON-NUMERIC COUNTY CODE, CARD REJECTED
          *** PCENETR 003 ERROR - COLUMN 07 - INVALID AQCR CODE, CARD REJECTED
          *** PCENETR 004 ERROR - COLUMN 79 - INVALID ACTION TYPE, CARD REJECTED
          *** PCENETR 005 ERROR - COLUMN 78 - INVALID CARD TYPE, CARD REJECTED
          *** PCENETR 006 ERROR - COLUMN 80 - INVALID CARD NUMBER, CARD REJECTED
          *** PCENETR 007 ERROR - COLUMN 10 - INVALID PLANT ID, CARD REJECTED
          *** PCENETR 014 ERROR - COLUMN 14 - INVALID POINT ID, CARD REJECTED
          *** PCENETR 085 ERROR - INVALID CHARACTER DETECTED IN BASE 36 CONVERSION ROUTINE, CARD REJECTED
          *** PCENETR 085 ERROR - INVALID CHARACTER DETECTED IN BASE 36 CONVERSION ROUTINE, CARD REJECTED
          *** PCENETR 085 ERROR - INVALID CHARACTER DETECTED IN BASE 36 CONVERSION ROUTINE, CARD REJECTED
          *** PCENETR 085 ERROR - INVALID CHARACTER DETECTED IN BASE 36 CONVERSION ROUTINE, CARD REJECTED


 3400800530001     1772GRANITEVILLE CO STEVENS STEAM STATION   MR  MCKEOWN      AP1
                                                                           B
           *** PCENETR 012 CONDITIONAL - COLUMN 78 - INVALID OWNERSHIP CODE

3400800530001011724961003452371920100050055000290800000                             AP2
                         R    E     R F
          *** PCENETR 018 CONDITIONAL - COLUMN 28 - UTM-VERTICAL COORDINATE OUT OF RANGE
          *** PCENETR 021 CONDITIONAL - COLUMN 37 - STACK DIAMETER EXCEEDS (0.2 * STACK HEIGHT)

NUMBER OF TRANSACTIONS READ:                    322
NUMBER OF INTERNAL TRANSACTIONS WRITTEN:        576
NUMBER OF TRANSACTIONS REJECTED:                 44
NUMBER OF ABORT MESSAGES:                         0
NUMBER OF ERROR MESSAGES:                       177
NUMBER OF CONDITIONAL MESSAGES:                 149
NUMBER OF WARNING MESSAGES:                       0
```

Figure 4.3.3-b. Diagnostic Report



INPUT NEDS POINT SOURCE MASTER FILE TRANSACTIONS

PAGE 1

Figure 4.3.3-c. NEDS Transaction Listing

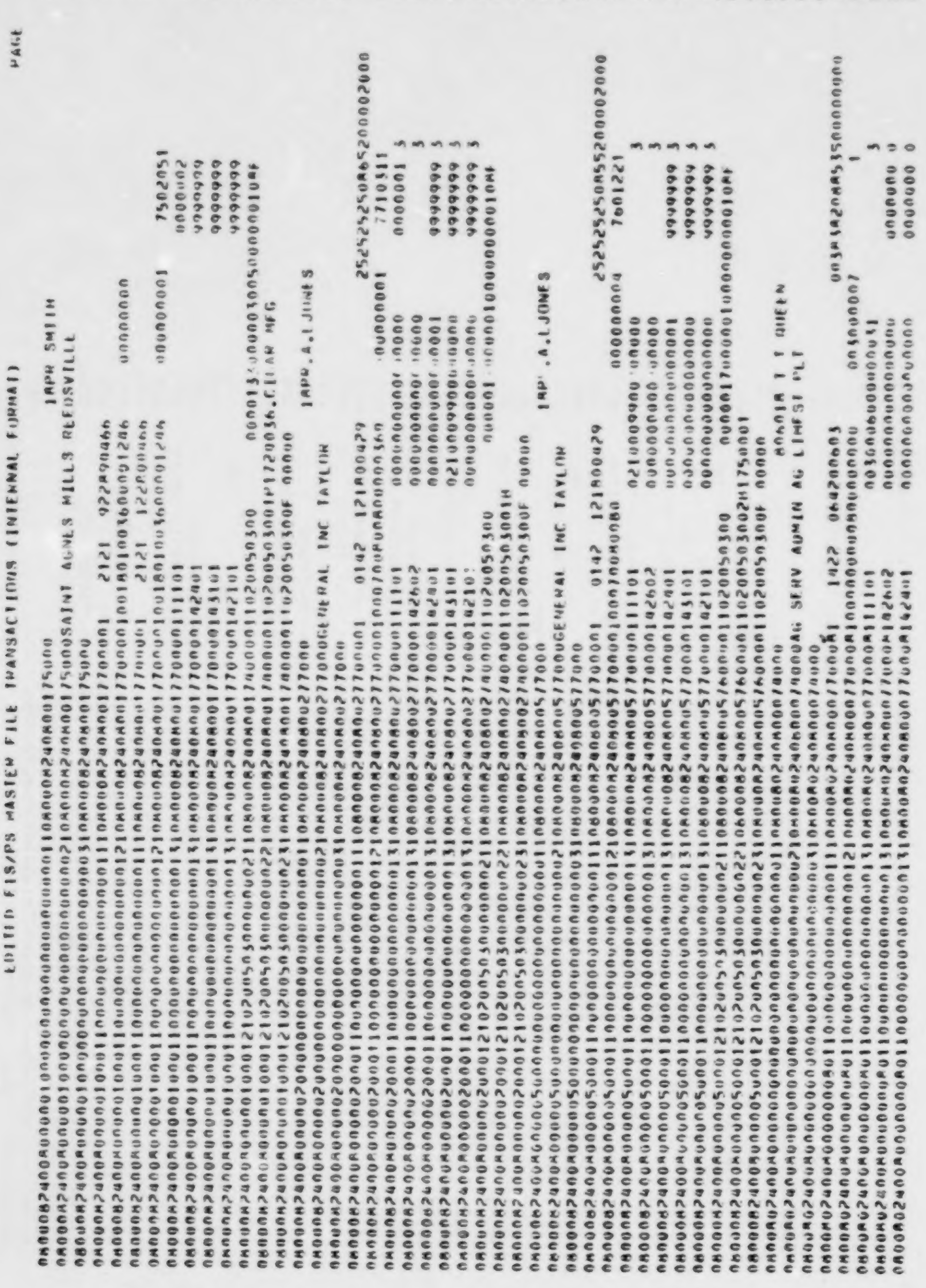
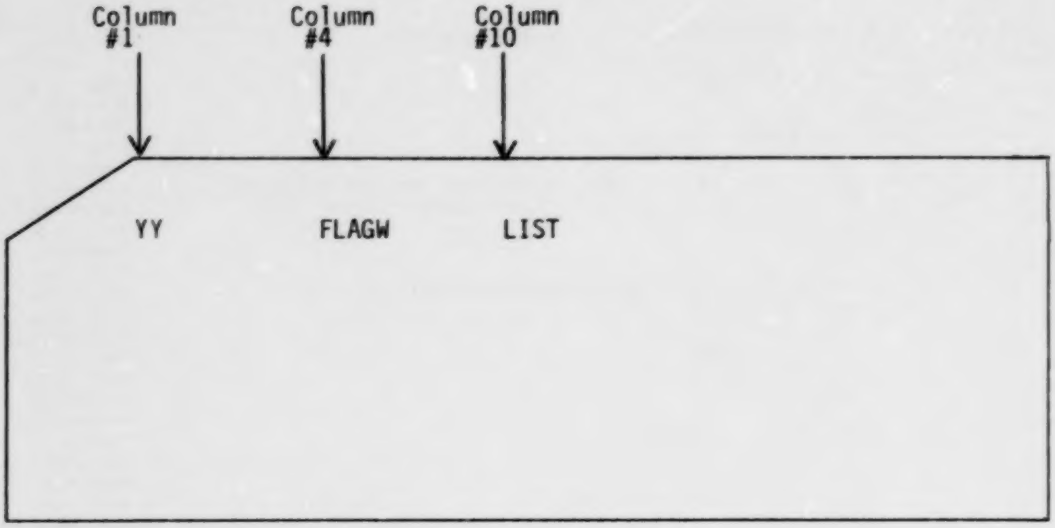


Figure 4.3.3-d. Internal Transaction Listing



Note:

A two-digit year must be coded in columns 1-2 for editing purposes.

Figure 4.3.3-e. Option Card Format

```
//* EPAL90/A087 MEGGERTIN, LLOYD 4. (919) 541-5491                      00000100
//*                                                                     00000200
//*    PROCEDURE NAME: EPCET10                                          00000300
//*    REVISION LEVEL: 1-00                                             00000400
//*    LAST UPDATE #: P-1                                               00000500
//*    DATE INCORPORATED: FEBRUARY 1, 1980                              00000600
//*                                                                     00000700
//*    THIS PROCEDURE ALLOWS THE USER TO CONVERT NEDS MASTER FILE       00000800
//*    TRANSACTIONS TO EIS/PS MASTER FILE TRANSACTIONS AND THEN         00000900
//*    EDIT THESE TRANSACTIONS                                          00001000
//*                                                                     00001100
//*                                                                     00001200
//EPCET10 PROC  PROJECT='CH.EPAL90.A087.CDHS.HO.PCT',                   00001300
//              PROG1=PSRNETR,                                          00001400
//              PROG2=PCENETR,                                          00001500
//              REGION1=150K,                                           00001600
//              REGION2=100K,                                           00001700
//              TIME1='1,0',                                            00001800
//              TIME2='1,0',                                            00001900
//              INTERN=EPINTERN,                                        00002000
//              UNIT=3330,                                              00002100
//              SERIAL=EDHSPK,                                          00002200
//              DISP='NEW,CATLG,DELETE',                                00002300
//              SECUNIT=TRK,                                            00002400
//              PRIMARY=20,                                             00002500
//              SECONDARY=10,                                           00002600
//              TEMP=SYSDA,                                             00002700
//              WORKSPC='20,10',                                        00002800
//              OUT=A                                                   00002900
//*                                                                     00003000
//SORT    EXEC  PGM=&PROG1,                                             00003100
//              REGION=&REGION1,                                        00003200
//              TIME=(&TIME1)                                           00003300
//*                                                                     00003400
//* SORT NEDS MASTER FILE TRANSACTIONS INTO FILE SEQUENCE               00003500
//*                                                                     00003600
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                                  00003700
//              VOLUME=(PRIVATE,,SERIAL),                               00003800
//              DISP=(SHR,PASS)                                         00003900
//SORTLIB    DD DSNAME=SYS1.SORTLIB,                                    00004000
//              DISP=(SHR,PASS)                                         00004100
//*                                                                     00004200
//SORTWK01   DD UNIT=&TEMP,                                             00004300
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                          00004400
//*                                                                     00004500
//SORTWK02   DD UNIT=(&TEMP,SEP=SORTWK01),                              00004600
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                          00004700
//*                                                                     00004800
//SORTWK03   DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                   00004900
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                          00005000
//*                                                                     00005100
//* INPUT DATA SET - NEDS MASTER FILE TRANSACTIONS                      00005200
//*                                                                     00005300
//EPSINPT    DD DSNAME=&INPUT,                                          00005400
//              DCB=(BLKSIZE=800                                        00005500
//*                                                                     00005600
```

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Figure 4.3.3-f. Cataloged Procedure EPCET10

```
//* OUTPUT DATA SET - SORTED NEDS MASTER FILE TRANSACTIONS                00005700
//*                                                                       00005800
//EPSOUTP    DD DSNAME=&&SORTED,                                          00005900
//              UNIT=&TEMP,                                               00006000
//              DISP=(NEW,PASS,DELETE),                                   00006100
//              SPACE=(TRK,(&SORTSPC),RLSE)                               00006200
//*                                                                       00006300
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                   00006400
//*                                                                       00006500
//EPSDIAG    DD SYSOUT=&OUT                                               00006600
//*                                                                       00006700
//* OUTPUT DATA SETS - SYSTEM OPERATION                                   00006800
//*                                                                       00006900
//SYSPRINT   DD SYSOUT=&OUT                                               00007000
//*                                                                       00007100
//SYSOUT     DD SYSOUT=&OUT                                               00007200
//*                                                                       00007300
//SYSDBOUT   DD SYSOUT=&OUT                                               00007400
//*                                                                       00007500
//SYSOTERM   DD SYSOUT=&OUT                                               00007600
//*                                                                       00007700
//SYSUDUMP   DD SYSOUT=&OUT                                               00007800
//*                                                                       00007900
//*                                                                       00008000
//CONVERT EXEC PGM=&PROG2,                                                00008100
//              REGION=&REGION2,                                          00008200
//              TIME=(&TIME2)                                             00008300
//*                                                                       00008400
//* CONVERT AND EDIT TRANSACTIONS                                         00008500
//*                                                                       00008600
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                                    00008700
//              VOLUME=(PRIVATE,RETAIN),                                  00008800
//              DISP=(SHR,PASS)                                           00008900
//*                                                                       00009000
//* INPUT DATA SET - SORTED NEDS MASTER FILE TRANSACTIONS                 00009100
//*                                                                       00009200
//EPSTRAN    DD DSNAME=&&SORTED,                                          00009300
//              DISP=(SHR,PASS)                                           00009400
//*                                                                       00009500
//* INPUT DATA SET - OPTION CARD                                          00009600
//*                                                                       00009700
//EPSOPIN    DD DDNAME=OPTIONS,                                           00009800
//              DCB=BLKSIZE=80                                            00009900
//*                                                                       00010000
//* OUTPUT DATA SET - EDITED EIS/PS MASTER FILE INTERIM TRANSACTIONS      00010100
//*                                                                       00010200
//EPSINTR    DD DSNAME=&PROJECT..DATA.&INTRM,                             00010300
//              VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                      00010400
//              DISP=(&DISP),                                             00010500
//              UNIT=&UNIT,                                               00010600
//              SPACE=(&SPCUNIT,(&PRIMARY,&SECONDRY),RLSE)                00010700
//*                                                                       00010800
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                   00010900
//*                                                                       00011000
//EPSDIAG    DD SYSOUT=&OUT                                               00011100
//*                                                                       00011200
```

(Page 2 of 3)

Figure 4.3.3-f - continued. Cataloged Procedure EPCET10

```
//* OUTPUT DATA SET - NEDS MASTER FILE TRANSACTION LISTING              00011300
//*                                                                     00011400
//EPSTRNL  DD SYSOUT=&OUT                                               00011500
//*                                                                     00011600
//* OUTPUT DATA SET - EIS/PS MASTER FILE INTERNAL TRANSACTION LISTING   00011700
//*                                                                     00011800
//EPSINTL  DD SYSOUT=&OUT                                               00011900
//*                                                                     00012000
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00012100
//*                                                                     00012200
//SYSPRINT DD SYSOUT=&OUT                                               00012300
//*                                                                     00012400
//SYSOUT   DD SYSOUT=&OUT                                               00012500
//*                                                                     00012600
//SYSDBOUT DD SYSOUT=&OUT                                               00012700
//*                                                                     00012800
//SYSDTERM DD SYSOUT=&OUT                                               00012900
//*                                                                     00013000
//SYSUDUMP DD SYSOUT=&OUT                                               00013100
//*                                                                     00013200
//*                                                                     00013300
```

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Figure 4.3.3-f - continued. Cataloged Procedure EPCET10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMASTR would be the full data set name of the EIS/PS master file)
PROG1	PSRNETR	NEDS transaction sort program
PROG2	PCENETR	NEDS to EIS/PS master file transaction conversion-edit program
TIME1	'1,0'	Time allocated for execution of PSRNETR
TIME2	'1,0'	Time allocated for execution of PCENETR
UNIT	3330	Unit type to which internal transactions are to be written
SERIAL	CDHSPK	Volume identification to which internal transactions are to be written
DISP	'NEW,CATLG, DELETE'	Disposition of internal transactions
SPCUNIT	TRK	Units in which space for internal transactions is to be allocated
PRIMARY	20	Primary space allocation for internal transactions
SECNDRY	10	Secondary space allocation for internal transactions
INTRTRN	EPINTERN	Lowest-level index of data set to contain internal transactions
OUT	A	SYSOUT class for all print files

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Figure 4.3.3-g. Substitutable Parameters for EPCET10

Parameter Name	Default Value	Description
REGION1	150K	Region size allocated for execution of PSRNETR
REGION2	100K	Region size allocated for execution of PCENETR
TEMP	SYSDA	Unit to be allocated for temporary files
WORKSPC	'20,10'	Space to be allocated for sort work files

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Figure 4.3.3-g - continued. Substitutable Parameters for EPCET10

4.3.4 MASTER FILE TRANSACTION SORT PROGRAM - PSRMFTR (EP0070)

4.3.4.1 Description

PSRMFTR (EP0070) sorts EIS/PS master file transactions into the sequence required by the master file transaction edit program, PEDMSTR (EP0080); Figure 4.3.4-a details this sort order. All master file transactions must be sorted by PSRMFTR (EP0070) before they can be edited by the master file transaction edit program. See Section 4.3.5 for additional information on the master file transactions.

4.3.4.2 File Formats

Input to this program consists solely of EIS/PS master file transactions. Refer to Figure 4.3.5-a for a description of the master file transaction formats.

PSRMFTR (EP0070) produces two output files: a diagnostic report and a temporary file containing the sorted master file transactions. The sorted transactions are in the correct sequence for use as input to the master file transaction edit program, PEDMSTR (EP0080). An example of the diagnostic report is shown in Figure 4.3.4-b.

4.3.4.3 Options and Control Cards

There are no options.

4.3.4.4 Error Messages

There are no error messages.

4.3.4.5 Cataloged JCL

PSRMFTR (EP0070) should always be executed in conjnction with the master file transaction edit program, PEDMSTR (EP0080). See Section 4.3.5.5 for a discussion of the cataloged procedure EPEDT10, which executes both programs.

4.3.4.6 Warnings and Special Instructions

Note that the COBOL sort verb is used in this program; therefore, the collating sequence for alphanumeric fields is determined by the computer at the user's particular installation.

In addition to the diagnostic reort produced by PSRMFTR (EP0070), messages generated by the sort-merge package will be printed. The format and content, as well as the physical location, of these messages depend upon the user's particular installation.

4.3.4.7 Cost Considerations

The following estimates are for the execution of PSRMFTR (EP0070) on an IBM 370/168:

Number of master file transactions: 239 records
CPU time: 1.31 seconds
I/O time: 1.63 seconds
Total time: 2.94 seconds

Estimated cost: $.41

4.3.4.8 Related Programs and Procedures

PSRMFTR (EP0070) should always be executed in conjunction with the master file transaction edit program, PEDMSTR (EP0080). The cataloged procedure EPEDT10 executes both programs.

The cataloged procedure EPEMM10 can be executed to sort master file transactions, edit the transactions, re-sort, insert emission factors into the transactions, re-sort, and update (or create) the emission factor file with the transactions. See Section 4.4.3 for a complete description of this procedure.

Record Position	Description	Sort Sequence
1 - 2	State	Ascending
3 - 6	County	Ascending
7 - 9	AQCR	Ascending
10 - 13	Plant ID	Ascending
19 - 20	Point ID	Ascending
78	Segment Type	Ascending
21 - 28	SCC	Ascending
21 - 22	PNR Sequence Number	Ascending
23 - 25	Line Number	Ascending
26	Comment Flag	Ascending
78 - 79	Card Number	Ascending
80	Action Code	Ascending

Figure 4.3.4-a. Sort Sequence for EIS/PS Master File Transactions

```
                 EIS/PS MASTER FILE TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                       PAGE     1

 PROGRAM NAME: PSRMFTR (EP0070)
 REVISION LEVEL: 1-00
 LAST UPDATE #: P-1
 DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF INPUT TRANSACTIONS:      239
NUMBER OF OUTPUT TRANSACTIONS:      239
```

Figure 4.3.4-b. Diagnostic Report

4.3.5 MASTER FILE TRANSACTION EDIT PROGRAM - PEDMSTR (EP0080)

4.3.5.1 Description

The EIS/PS master file can be created and updated using EIS/PS input transactions. These transactions can be either add, delete, or change. The master file transaction edit program edits the input transactions and converts those that pass the edit criteria into internal transactions. The internal transactions can be sorted and input to the master file internal transaction emission factor insertion program, PMSEFIN (EP0100), and the master file maintenance program, PFMMSTR (EP0120). There are 14 different transaction formats (see Figure 4.3.5-a). A description of the transaction fields is given in Figure 4.3.5-b. The format of the internal transactions is given in Figure 4.3.5-c. Load sheets for the transactions are shown in Appendix C.

A sort program, PSRMFTR (EP0070), is provided to sort the input transactions prior to executing PEDMSTR (EP0080). Having the transactions sorted facilitates checking the results of the edit by grouping transactions for an individual plant, point, SCC, etc. However, the editing of a transaction is done independently of all other transactions. That is, if transactions 01, 02, and 03 are entered to add a plant, and the 02 transaction is rejected by the edit, the 01 and 03 transactions will be output as valid internal transactions. If the file maintenance program was run at that time, the absence of the 02 card would cause the rejection of the plant addition. Thus, it is recommended that the edit be run alone until all transactions are correct; the insertion and file maintenance can then be run.

The transaction edit checks correspond to the NEDS point source edit checks, as documented by NADB, for fields that are used by NEDS. In addition, the EIS/PS fields are edited. Figure 4.3.5-b gives information on valid codes for the fields and references additional information sources. Further information on NEDS point source coding can be found in AEROS Manual Series, Volume II: AEROS User's Manual, Section 3.1.2.

A key is added to the input record format to form an internal transaction (see Figure 4.3.5-c). In this key, the four-character alphanumeric plant ID is changed to an eight-character numeric field. This is done so that numeric plant ID's will occur at the beginning of the file on all computers; i.e., the first plant in a county is 0001, not AAAA. Likewise, the two-character alphanumeric NEDS point ID is changed to a four-character numeric field. Use of this technique allows generated reports to be produced with all plant, point information appearing together and in proper sequence even though alphanumeric plant/point ID's may have been coded by the user.

4.3.5.2 File Formats

Two files are input to PEDMSTR (EP0080): the input transaction file and an option card. See Figure 4.3.5-a for the transaction formats and Figure 4.3.5-b for a description of the fields. The options are discussed in the following section.

PEDMSTR (EP0080) produces a diagnostic report and a file containing internal transactions. The output internal transactions are in the format required for input to the master file internal transaction emission factor insertion program, PMSEFIN (EP0100), and the master file maintenance program, PFMMSTR (EP0120). However, each of these programs requires that the transactions be sorted; that is, the master file internal transaction pre-insertion sort program, PSREFIN (EP0090), must be run prior to executing PMSEFIN (EP0100), and the master file internal transaction sort program, PSRINTR (EP0110), must be run prior to executing PFMMSTR (EP0120). Figure 4.3.5-c illustrates the format of the internal transactions.

The diagnostic report contains a listing of the input transactions found to be in error. Each incorrect field is underlined with a B in the beginning column of the field and an E in the ending column. A corresponding error message is also printed. The listing does not contain information on warning messages unless requested on the option card. The diagnostic report also lists the summary statistics. See Figure 4.3.5-d for an example of the diagnostic report.

PEDMSTR (EP0080) also produces optional listings of the input transactions and of the output internal transactions. Figures 4.5.3-e and 4.5.3-f show examples of these listings. Further information can be found in the discussion of options in the following section.

4.3.5.3 Options and Control Cards

An option card is required for PEDMSTR (EP0080). This card must contain a year date, which is used to validate dates on the transactions. No date (except compliance schedule) is allowed to be greater than the option card date.

The FLAGW option allows the user to request that warning messages be listed in the diagnostic report. A warning message indicates that an EIS/PS field contains questionable data which is not rejected. Transactions which have been flagged with warnings will be printed in the diagnostic report only if FLAGW is specified. A value of NOFLAGW or no entry in the field (default of NOFLAGW) indicates that warning messages will not be printed in the diagnostic report.

The LIST option allows the user to request that listings of the input transactions and of the output internal transactions be produced. If the value NOLIST or no entry appears in the field, no listings of these files will be produced.

If no option card is included in the execution deck, an ABORT message will be printed and program execution will be terminated. The year must be valid for the program to be executed; however, default values of NOLIST and NOFLAGW will be used when invalid specifications are encountered in these fields.

4.3.5.4 Error Messages

PEDMSTR 001 ABORT - NO OPTION CARD PRESENT

Meaning: The option card is required.

Action: Include an option card and resubmit the job.

PEDMSTR 002 ABORT - NON-NUMERIC YEAR ON OPTION CARD

Meaning: This field must be numeric.

Action: Correct the option card and resubmit the job.

PEDMSTR 003 CONDITIONAL - INVALID FLAGW OPTION, DEFAULT (NOFLAGW) ASSUMED

Meaning: The only valid values are FLAGW and NOFLAGW. The default, NOFLAGW, is assumed.

Action: No action need be taken unless the warning messages are required; in that case, correct the option card and resubmit the job.

PEDMSTR 004 CONDITIONAL - INVALID LIST OPTION, DEFAULT (NOLIST) ASSUMED

Meaning: The only valid values are LIST and NOLIST; therefore, the default, NOLIST, is assumed.

Action: No action need be taken unless the file listings are required; in that case, correct the option card and resubmit the job.

PEDMSTR 005 ERROR - COLUMN 1 - INVALID STATE CODE, CARD REJECTED

Meaning: The valid codes are 01-55.

Action: Correct and resubmit the transaction.

PEDMSTR 006 ERROR - COLUMN 03 - NON-NUMERIC COUNTY CODE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 007 ERROR - COLUMN 07 - INVALID AQCR, CARD REJECTED

Meaning: The valid AQCR's are 001-247.

Action: Correct and resubmit the transaction.

PEDMSTR 008 ERROR - COLUMN 10 - INVALID PLANT-ID, CARD REJECTED

Meaning: The plant ID must contain only numbers and/or letters; no blanks can be included.

Action: Correct and resubmit the transaction.

PEDMSTR 009 ERROR - COLUMN 19 - INVALID POINT-ID, CARD REJECTED

Meaning: The point ID must contain only numbers and/or letters; no blanks can be included.

Action: Correct and resubmit the transaction.

PEDMSTR 010 ERROR - COLUMN 21 - NON-NUMERIC SCC NUMBER, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 011 ERROR - COLUMN 29 - NON-NUMERIC SCC SEGMENT NUMBER, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 012 ERROR - COLUMN 21 - NON-NUMERIC PNR SEQUENCE NUMBER, CARD REJECTED
Meaning: This field must be numeric.
Action: Correct and resubmit the transaction.

PEDMSTR 013 ERROR - COLUMN 23 - NON-NUMERIC PNR LINE NUMBER, CARD REJECTED
Meaning: This field must be numeric.
Action: Correct and resubmit the transaction.

PEDMSTR 014 ERROR - COLUMN 78 - INVALID TRANSACTION CARD NUMBER, CARD REJECTED
Meaning: The valid codes are 01, 02, 03, 04 (plant); 11, 12, 13, 14 (point); 21, 22, 23, 24, 25 (SCC); and 30 (comment).
Action: Correct and resubmit the transaction.

PEDMSTR 015 ERROR - COLUMN 80 - INVALID ACTION TYPE, CARD REJECTED
Meaning: The valid codes are A (add), C (change), and D(delete).
Action: Correct and resubmit the transaction.

PEDMSTR 016 WARNING - COLUMN 14 - INVALID DATE SPECIFIED, CARD REJECTED
Meaning: This field must be numeric and the day must be 001-366.
Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 017 CONDITIONAL - COLUMN 14 - YEAR SPECIFIED IS GREATER THAN OPTION YEAR
Meaning: The year must not be greater than the year specified on the option card.
Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 018 CONDITIONAL - COLUMN 36 - INVALID CITY SPECIFIED

Meaning: This field must be numeric; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 019 ERROR - COLUMN 40 - NON-NUMERIC UTM ZONE NUMBER, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 020 CONDITIONAL - COLUMN 40 - UTM ZONE NUMBER OUT OF RANGE

Meaning: Valid UTM zones can be found in Appendix A, Table A-1. The transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 021 CONDITIONAL - COLUMN 40 - UTM ZONE NUMBER BLANK FOR ADD TRANSACTION

Meaning: The UTM zone is required for an add transaction; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 022 CONDITIONAL - COLUMN 42 - INVALID OWNERSHIP CODE

Meaning: The valid codes are P, S, L, U, and F; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 023 ERROR - COLUMN 58 - NON-NUMERIC TELEPHONE NUMBER, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 024 ERROR - COLUMN 19 - NAME/ADDRESS FIELD BLANK FOR ADD TRANSACTION, CARD REJECTED

Meaning: This field is required for an add transaction.

Action: Correct and resubmit the transaction.

PEDMSTR 025 ERROR - COLUMN 67 - NON-NUMERIC NUMBER OF EMPLOYEES, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 026 CONDITIONAL - COLUMN 71 - NON-NUMERIC PROPERTY AREA

Meaning: This field must be numeric; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 027 CONDITIONAL - COLUMN 24 - SIC CODE BLANK FOR ADD TRANSACTION

Meaning: This field is required for an add transaction; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 028 CONDITIONAL - COLUMN 24 - NON-NUMERIC SIC CODE

Meaning: This field must be numeric; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 029 ERROR - COLUMN 28 - NON-NUMERIC IPP CODE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 030 ERROR - COLUMN 30 - NON-NUMERIC UTM - HORIZONTAL CODE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 031 CONDITIONAL - COLUMN 30 - UTM - HORIZONTAL CODE OUT OF RANGE

Meaning: The valid codes can be found in Appendix A, Table A-1. The transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 032 CONDITIONAL - COLUMN 30 - UTM - HORIZONTAL CODE BLANK FOR ADD TRANSACTION

Meaning: This field is required on an add transaction; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 033 ERROR - COLUMN 34 - NON-NUMERIC UTM - VERTICAL CODE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 034 CONDITIONAL - COLUMN 34 - UTM - VERTICAL CODE OUT OF RANGE

Meaning: The valid codes can be found in Appendix A, Table A-1. The transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 035 CONDITIONAL - COLUMN 34 - UTM - VERTICAL CODE BLANK FOR ADD TRANSACTION

Meaning: This field is required on an add transaction; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 036 ERROR - COLUMN 39 - NON-NUMERIC LATITUDE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 037 ERROR - COLUMN 45 - NON-NUMERIC LONGITUDE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 038 ERROR - COLUMN 52 - NON-NUMERIC ANNUAL THRUPUT PERCENTAGE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 039 CONDITIONAL - COLUMN 60 - INVALID DAY FOR OPERATING RATE

Meaning: The hours per day must be 00-24; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 040 ERROR - COLUMN 65 - NON-NUMERIC BOILER DESIGN CAPACITY, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 041 ERROR - COLUMN 70 - NON-NUMERIC HEATED SPACE PERCENTAGE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 042 ERROR - COLUMN 21 - NON-NUMERIC STACK HEIGHT, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 043 ERROR - COLUMN 25 - NON-NUMERIC STACK DIAMETER, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 044 CONDITIONAL - COLUMN 25 - STACK DIAMETER EXCEEDS 20 PERCENT OF THE STACK HEIGHT

Meaning: The stack diameter must be less than 20% of the stack height; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 045 ERROR - COLUMN 28 - NON-NUMERIC STACK TEMPERATURE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 046 CONDITIONAL - COLUMN 28 - STACK TEMPERATURE LESS THAN 77 OR GREATER THAN 2000

Meaning: The temperature must be 77^{o}-2000^{o} F; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 047 ERROR - COLUMN 32 - NON-NUMERIC EXHAUST FLOW RATE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 048 ERROR - COLUMN 39 - NON-NUMERIC VELOCITY, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 049 ERROR - COLUMN 44 - NON-NUMERIC PLUME HEIGHT, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 050 CONDITIONAL - COLUMN 44 - PLUME HEIGHT IS GREATER THAN 200

Meaning: The plume height must be less than 200; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 051 ERROR - COLUMN 48 - INVALID POINTS WITH COMMON STACK, CARD REJECTED

Meaning: The point ID's must contain letters or numbers; no blanks are allowed.

Action: Correct and resubmit the transaction.

PEDMSTR 052 CONDITIONAL - COLUMN 48 - 1ST POINT GREATER THAN OR EQUAL TO 2ND POINT

Meaning: The first point with common stack must be less than the second point; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 053 CONDITIONAL - COLUMN 52 - INVALID COMPLIANCE STATUS

Meaning: The valid codes are 1-4; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 054 ERROR - COLUMN 53 - INVALID COMPLIANCE SCHEDULE , CARD REJECTED

Meaning: This field must be numeric with the month less than 13.

Action: Correct and resubmit the transaction.

PEDMSTR 055 CONDITIONAL - COLUMN 53 - YEAR OF COMPLIANCE SCHEDULE NOT WITHIN 5 YEARS

Meaning: The year of compliance schedule must not be greater than the option year plus 5; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 056 ERROR - COLUMN 57 - INVALID YEAR OF COMPLIANCE UPDATE, CARD REJECTED

Meaning: The field must be numeric with the month between 00 and 12 and the day between 00 and 31.

Action: Correct and resubmit the transaction.

PEDMSTR 057 CONDITIONAL - COLUMN 57 - YEAR OF COMPLIANCE UPDATE GREATER THAN OPTION YEAR

Meaning: The year of compliance update must not be greater than the option year; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 058 ERROR - COLUMN 60 - NON-NUMERIC DAY FOR OPERATING RATE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 059 ERROR - COLUMN 21 - NON-NUMERIC POLLUTANT ID, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 060 ERROR - COLUMN 26 - NON-NUMERIC CONTROL EQUIPMENT COST, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 061 ERROR - COLUMN 33 - INVALID PRIMARY CONTROL EQUIPMENT, CARD REJECTED

Meaning: The valid codes can be found in Appendix A, Table A-2.

Action: Correct and resubmit the transaction.

PEDMSTR 062 ERROR - PRIMARY EQUIP AND EST CONTROL EFF NOT BOTH BLANK FOR ADD, CARD REJECTED

Meaning: Both the primary control equipment and the estimated control efficiency, or neither, must be blank for an add transaction.

Action: Correct and resubmit the transaction.

PEDMSTR 063 ERROR - COLUMN 36 - INVALID SECONDARY CONTROL EQUIPMENT, CARD REJECTED

Meaning: The valid codes can be found in Appendix A, Table A-2.

Action: Correct and resubmit the transaction.

PEDMSTR 064 ERROR - COLUMN 39 - NON-NUMERIC ESTIMATED CONTROL EFFICIENCY, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 065 ERROR - COLUMN 42 - NON-NUMERIC EMISSIONS ESTIMATE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 066 ERROR - COLUMN 42 - EMISSION ESTIMATE TOO LARGE

Meaning: The emissions estimate must not be greater than 800,000 tons.

Action: Correct and resubmit the transaction.

PEDMSTR 067 ERROR - COLUMN 42 - EMISS. EST. REQUIRED FOR METHODS 2, 4, 5; CARD REJECTED

Meaning: Estimation codes 2, 4, and 5 require an estimated emissions.

Action: Correct and resubmit the transaction.

PEDMSTR 068 ERROR - COLUMN 49 - NON-NUMERIC MEASURED EMISSIONS, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 069 ERROR - COLUMN 56 - NON-NUMERIC ALLOWABLE EMISSIONS, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 070 WARNING - COLUMN 63 - NON-NUMERIC EMISSIONS UNITS CODE

Meaning: This field must be numeric; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 071 ERROR - COLUMN 64 - INVALID ESTIMATION METHOD, CARD REJECTED

Meaning: The valid codes are 0-7 and blank.

Action: Correct and resubmit the transaction.

PEDMSTR 072 WARNING - COLUMN 65 - NON-NUMERIC TEST METHOD

Meaning: This field must be numeric; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 073 WARNING - COLUMN 31 - NON-NUMERIC BEC CODE

Meaning: This field must be numeric; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 074 WARNING - COLUMN 36- NON-NUMERIC FUEL UNITS CODE

Meaning: This field must be numeric; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 075 ERROR - COLUMN 37 - NON-NUMERIC FUEL PROCESS RATE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 076 ERROR - COLUMN 44 - NON-NUMERIC MAXIMUM DESIGN RATE, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 077 ERROR - COLUMN 51 - NON-NUMERIC SULFUR CONTENT, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 078 ERROR - COLUMN 54 - NON-NUMERIC ASH CONTENT, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 079 ERROR - COLUMN 57 - NON-NUMERIC HEAT CONTENT, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 080 CONDITIONAL - COLUMN 31 - INVALID CONFIDENTIALITY, REPLACING WITH 1

Meaning: The valid codes are 1 and 2; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 081 ERROR - COLUMN 31 - CONFIDENTIALITY OF 3 IS NOT ALLOWED, CARD REJECTED

Meaning: The valid codes are 1 and 2.

Action: Correct and resubmit the transaction.

PEDMSTR 082 ERROR - COLUMN 63 - INVALID ECAP, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 083 ERROR - COLUMN 62 - INVALID ASH/SULFUR ORIGIN, CARD REJECTED

Meaning: The valid codes are F (federal), S (state), and L (local).

Action: Correct and resubmit the transaction.

PEDMSTR 084 ERROR - COLUMN 33 - FIRST POLLUTANT ID IS NON-NUMERIC, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 085 ERROR - COLUMN 38 - FIRST EMISSION FACTOR IS NON-NUMERIC, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 086 CONDITIONAL - COLUMN 47 - FIRST ASH/SULFUR CODE IS INVALID

Meaning: The valid codes are A (ash), S (sulfur) and blank; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 087 WARNING - COLUMN 48 - FIRST EMISSION FACTOR UNITS CODE IS NON-NUMERIC

Meaning: This field must be numeric; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 088 ERROR - COLUMN 49 - SECOND POLLUTANT ID IS NON-NUMERIC, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 089 ERROR - COLUMN 54 - SECOND EMISSION FACTOR IS NON-NUMERIC, CARD REJECTED

Meaning: This field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 090 CONDITIONAL - COLUMN 63 - SECOND ASH/SULFUR CODE IS INVALID

Meaning: The valid codes are A (ash), S (sulfur), and blank; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 091 WARNING - COLUMN 64 - SECOND EMISSION FACTOR UNITS CODE IS NON-NUMERIC

Meaning: This field must be numeric; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 092 ERROR - COLUMN 78 - INVALID CARD NUMBER FOR DELETE, CARD REJECTED

Meaning: The valid delete transactions are 01, 11, 13, 21, 23, and 30.

Action: Correct and resubmit the transaction.

PEDMSTR 093 CONDITIONAL - COLUMN 52 - INVALID THRUPUT SUM

Meaning: Thruput should sum to 100%; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 094 CONDITIONAL - COLUMN 21 - STACK HEIGHT LESS THAN ZERO OR GREATER THAN 500

Meaning: The valid stack height is 0-500 feet; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 095 CONDITIONAL - COLUMN 63 - INVALID ECAP CODE

Meaning: The valid codes are 0, 1, and 2; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 096 ERROR - COLUMN 26 - INVALID COMMENT FLAG, CARD REJECTED

Meaning: The valid codes are L (left) and R (right).

Action: Correct and resubmit the transaction.

PEDMSTR 097 CONDITIONAL - COLUMN 56 - ALLOWABLE EMISSIONS OUT OF RANGE

Meaning: The field is greater than 25,000; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 098 ERROR - INVALID CHARACTER DETECTED IN CONVERSION ROUTINE, CARD REJECTED

Meaning: In converting a point or plant ID, an invalid character was encountered. Only numbers and letters are allowed for these fields.

Action: Correct and resubmit the transaction.

PEDMSTR 099 CONDITIONAL - COLUMN 33 - SOURCE DESCRIPTION BLANK FOR SCC 97, 98, OR 99

Meaning: A source description is required for add transactions for SCC's ending in 97, 98, or 99; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 100 CONDITIONAL - NEDS POINT ID NOT WITHIN COMMON STACK POINTS

Meaning: The NEDS point ID must lie between the common stack points; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 101 CONDITIONAL - COLUMN 42 - ESTIMATED EMISSIONS BETWEEN 25,000 AND 800,000

Meaning: The value is expected to be below 25,000; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 102 ERROR - COLUMN 19 - NAME/ADDRESS FIELD CANNOT BE DELETED, CARD REJECTED

Meaning: This field cannot be deleted.

Action: Correct and resubmit the transaction.

PEDMSTR 103 ERROR - COLUMN 33 - SOURCE DESCRIPTION CANNOT BE DELETED, CARD REJECTED

Meaning: This field cannnot be deleted.

Action: Correct and resubmit the transaction.

PEDMSTR 104 ERROR - NON-KEY FIELDS NOT BLANK FOR DELETE, CARD REJECTED

Meaning: All non-key fields are required to be blank on a delete transaction (this is to insure that records are not deleted by mistake).

Action: Correct and resubmit the transaction.

PEDMSTR 105 ERROR - COLUMN 63 - INVALID ASH/SULFUR SOURCE, CARD REJECTED

Meaning: Source codes of F, S, or L are not allowed; all other letters and numbers are accepted.

Action: Correct and resubmit the transaction.

PEDMSTR 106 ERROR - COLUMN 31 - INVALID EMF ORIGIN, CARD REJECTED

Meaning: Valid codes are F (federal), S (state), and L (local).

Action: Correct and resubmit the transaction.

PEDMSTR 107 ERROR - COLUMN 32 - INVALID EMF SOURCE, CARD REJECTED

Meaning: Source codes of F, S, or L are not allowed; all other letters and numbers are accepted.

Action: Correct and resubmit the transaction.

PEDMSTR 108 - CONDITIONAL - COLUMN 62 - INVALID WEEK FOR OPERATING RATE

Meaning: The day per week is expected to be 0 thru 7; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 109 ERROR - COLUMN 62 - NON-NUMERIC WEEK FOR OPERATING RATE, CARD REJECTED

Meaning: The field must be numeric.

Action: Correct and resubmit the transaction.

PEDMSTR 110 - CONDITIONAL - COLUMN 63 - INVALID YEAR FOR OPERATING RATE

Meaning: The weeks per year is expected to be 0 thru 52; however, the transaction was not rejected.

Action: The field can be corrected and the job resubmitted, or the master file record can be updated later using a change transaction.

PEDMSTR 111 ERROR - COLUMN 63 - NON-NUMERIC YEAR FOR OPERATING RATE, CARD REJECTED

Meaning: The field must be numeric.

Action: Correct and resubmit the transaction.

4.3.5.5 Cataloged JCL - EPEDT10

4.3.5.5.1 JCL listing - PEDMSTR (EP0080) can be run by executing the cataloged procedure EPEDT10. This procedure also executes the master file transaction sort program, PSRMFTR (EP0070). See Figure 4.3.5-h for a listing of EPEDT10.

4.3.5.5.2 Cross-reference of DD names and files

Program Name: PSRMFTR (EP0070)

DD Name	File Description	Input/Output
EPSINPT	Master file transactions	Input
EPSOUTP	Sorted master file transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PEDMSTR (EP0080)

DD Name	File Description	Input/Output
EPSTRAN	Sorted master file transactions	Input
EPSOPTN	Option card	Input
EPSINTR	Internal transactions	Output
EPSDIAG	Diagnostic report	Output
EPSTRNL	Input transaction listing	Output
EPSINTL	Output internal transaction listing	Output

4.3.5.5.3 User-supplied JCL - To execute the cataloged procedure EPEDT10, the user must specifiy the data set name of the internal transaction file. An option card must be included. See Figure 4.3.5-i for a description of the procedure's substitutable parameters.

4.3.5.5.4 Sample run stream - The following run stream would edit input transactions entered on cards. A year of 80 is specified, along with the default options NOLIST and NOFLAGW. The data set name for the internal transactions is 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.INTRNS'.

```
// EXEC EPEDT10,
//      INTRTRN=INTRNS
//SORT.INPUT DD *
Transaction cards
//EDIT.OPTIONS DD *
80
/*
```

4.3.5.6 Warnings and Special Instructions

See warning for PCENETR.

4.3.5.7 Cost Considerations

To reduce the cost of running PEDMSTR (EP0080), use the default options NOLIST and NOFLAGW.

The estimates listed below are based on the execution, on an IBM 370/168, of the run stream discussed in Section 4.3.5.5.4:

Number of input transactions: 239 transactions
Number of output internal transactions: 236 transactions
CPU time: .8 seconds
I/O time: 1.37 seconds

Total time:	2.23 seconds
Estimated cost:	$.31

4.3.5.8 Related Programs and Procedures

The cataloged procedure EPEMM10 can be executed to edit the EIS/PS transactions, insert emission factor information into the transactions, sort them, and update the master file. See Section 4.4.3 for a complete description of this procedure.

EIS/PS Master File Transaction - 01 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 21	3	Alphanumeric	User Control Region
22 - 23	2	Alphanumeric	Local Control
24 - 35	12	Alphanumeric	User Plant ID
36 - 39	4	Numeric	City
40 - 41	2	Numeric	UTM Zone
42	1	Alphabetic	Ownership Code
43 - 57	15	Alphanumeric	Contact
58 - 67	10	Numeric	Telephone
68 - 77	10	Alphanumeric	Principal Product
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 02 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 66	48	Alphanumeric	Name and Address
67 - 70	4	Numeric	Number of Employees
71 - 76	6	Numeric	Property Area
77	1		Unused
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 03 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 66	48	Alphanumeric	Mailing Address
67 - 77	11		Unused
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 04 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 70	52	Alphanumeric	NEDS P7 Plant Comment
71 - 77	7		Unused
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 11 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 20	2	Alphanumeric	NEDS Point ID
21 - 23	3	Alphanumeric	User Point ID
24 - 27	4	Numeric	SIC Code
28 - 29	2	Numeric	IPP Code
30 - 33	4	Numeric	UTM Horizontal Coordinate
34 - 38	5	Numeric	UTM Vertical Coordinate
39 - 44	6	Numeric	Latitude
45 - 51	7	Numeric	Longitude
52 - 59	8	Numeric	Percentage Annual Thruput
60 - 64	5	Numeric	Normal Operating Rate
65 - 69	5	Numeric	Boiler Design Capacity
70 - 72	3	Numeric	Space Heat Percentage
73 - 77	5		Unused
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 12 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 20	2	Alphanumeric	NEDS Point ID
21 - 24	4	Numeric	Stack Height
25 - 27	3	Numeric	Stack Diameter
28 - 31	4	Numeric	Stack Temperature
32 - 38	7	Numeric	Exhaust Flow Rate
39 - 43	5	Numeric	Velocity
44 - 47	4	Numeric	Plume Height
48 - 51	4	Alphanumeric	Points with Common Stack
52	1	Numeric	Compliance Status
53 - 56	4	Numeric	Compliance Schedule
57 - 62	6	Numeric	Compliance Update
63	1	Numeric	ECAP
64 - 75	12	Numeric	Control Regulations
76 - 77	2		Unused
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 13 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 20	2	Alphanumeric	NEDS Point ID
21 - 25	5	Numeric	Point Pollutant ID
26 - 32	7	Numeric	Control Equipment Cost
33 - 35	3	Numeric	Primary Control Equipment
36 - 38	3	Numeric	Secondary Control Equipment
39 - 41	3	Numeric	Estimated Control Efficiency
42 - 48	7	Numeric	Estimated Emissions
49 - 55	7	Numeric	Measured Emissions
56 - 62	7	Numeric	Allowable Emissions
63	1	Numeric	Emissions Units
64	1	Numeric	Estimation Method
65	1	Numeric	Test Method
66 - 77	12		Unused
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 14 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 20	2	Alphanumeric	NEDS Point ID
21 - 72	52	Alphanumeric	NEDS P7 Point Comment
73 - 77	5		Unused
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 21 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 20	2	Alphanumeric	NEDS Point ID
21 - 28	8	Numeric	SCC
29 - 30	2	Numeric	SCC Sequence Number
31 - 35	5	Numeric	BEC Code
36	1	Numeric	Fuel Units
37 - 43	7	Numeric	Fuel Process Rate
44 - 50	7	Numeric	Maximum Design Rate
51 - 53	3	Numeric	Sulfur Content
54 - 56	3	Numeric	Ash Content
57 - 61	5	Numeric	Heat Content
62	1	Alphabetic	Ash-Sulfur Origin
63	1	Alphabetic	Ash-Sulfur Source
64 - 77	14		Unused
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 22 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 20	2	Alphanumeric	NEDS Point ID
21 - 28	8	Numeric	SCC
29 - 30	2	Numeric	SCC Sequence Number
31	1	Numeric	Confidentiality
32	1	Alphabetic	Source Code
33 - 57	25	Alphanumeric	Source Description
58 - 77	20		Unused
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 23 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 20	2	Alphanumeric	NEDS Point ID
21 - 28	8	Numeric	SCC
29 - 30	2	Numeric	SCC Sequence Number
31	1	Alphabetic	EMF Origin
32	1	Alphanumeric	EMF Source
33 - 37	5	Numeric	SCC Pollutant ID
38 - 46	9	Numeric	Emission Factor
47	1	Alphabetic	Ash-Sulfur Code
48	1	Numeric	EMF Units
49 - 64	16		Repeat Column 33 - 48
65 - 77	13		Unused
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 24 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 20	2	Alphanumeric	NEDS Point ID
21 - 28	8	Numeric	SCC
29 - 30	2	Numeric	SCC Sequence Number
31 - 56	26	Alphanumeric	NEDS P7 SCC Comment (Left Half)
57 - 77	21		Unused
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 25 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 20	2	Alphanumeric	NEDS Point ID
21 - 28	8	Numeric	SCC
29 - 30	2	Numeric	SCC Sequence Number
31 - 56	26	Alphanumeric	NEDS P7 SCC Comment (Right Half)
57 - 77	21		Unused
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

EIS/PS Master File Transaction - 30 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Alphanumeric	Plant ID
14 - 18	5	Numeric	Date
19 - 20	2	Alphanumeric	NEDS Point ID
21 - 22	2	Numeric	PNR Sequence Number
23 - 25	3	Numeric	PNR Line Number
26	1	Alphabetic	Comment Flag
27 - 77	51	Alphanumeric	Comment
78 - 79	2	Numeric	Card Number
80	1	Alphabetic	Action Code

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Figure 4.3.5-a - continued. EIS/PS Master File Transaction Formats

Action Code: Indicates whether the transaction is an add, change, or delete transaction.

Card Number: All transactions
Valid Codes: A - Add
C - Change
D - Delete
Field Length: 1 character

Allowable Emissions: The maximum emissions, in tons per year, that the source is legally allowed to discharge into the atmosphere.

Card Number: 13
Valid Codes: The fields must be numeric. Values above 25,000 will cause a conditional diagnostic message to be printed.
Field Length: 7 characters

AQCR: Identifies the Air Quality Control Region (AQCR) in which the plant is located. Valid AQCR's for each state can be found in AEROS Manual Series, Volume V: AEROS Manual of Codes, Section 2.3.0.

Card Number: All transactions
Valid Codes: 001 - 247
Field Length: 3 characters

Ash Content: The ash content for combustion processes. The ash content is indicated as a weight percentage.

Card Number: 21
Valid Codes: The field must be numeric.
Field Length: 3 characters with one decimal position assumed

(Page 1 of 21)

Figure 4.3.5-b. Definition of EIS/PS Master File Transaction Fields

Ash-Sulfur Code: Indicates whether or not the ash or sulfur contents are to be used in the calculation of the estimated emissions.

Card Number: 23
Valid Codes: A - Ash
S - Sulfur
Field Length: 1 character

Ash-Sulfur Origin: Indicates the origin of the emission factor information related to the SCC.

Card Number: 21
Valid Codes: F - Federal
S - State
L - Local
Field Length: 1 character

Ash-Sulfur Source: A user-defined code to specify individual local emission factor information.

Card Number: 21
Field Length: 1 character

BEC Code: The first three characters indicate the basic equipment classification code. The last two characters are used to number units at the same source.

Card Number: 21
Valid Codes: The field must be numeric. A listing of BEC codes can be found in the Air Pollution Manual of Coding, A Coding System for Identification of Basic Equipment and Control Devices Used in Industrial Processes, Peter Loquercio and

(Page 2 of 21)

Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Stanley, U. S. Dept. of HEW, Public Health Service, National Center for Air Pollution Control, 1968.

Field Length: 5 characters

Boiler Design Capacity: The boiler input capacity before heat transfer. Units are in millions of BTU per hour. Zero should be used for points not containing a boiler. Note that a boiler is defined as a burner, firebox, or heat exchanger, and a means of creating and directing a flow of gases through the unit.

Card Number: 11

Valid Codes: The field must be numeric.

Field Length: 5 characters

Card Number: The card number of the transaction.

Card Number: All transactions

Valid Codes: 01, 02, 03, 04, 11, 12, 13, 14, 21, 22, 23, 24, 25, 30

Field Length: 2 characters

City: The SAROAD code number corresponding to the city in which the source is located.

Card Number: 01

Valid Codes: Refer to the AEROS Manual Series, Volume 5: AEROS Manual of Codes, Section 2.2.0 for a full list of city codes. If the city is not listed or the plant is not in a city, leave the field blank.

Field Length: 4 characters

Comment: Contains a portion of a line for the permits and registration information.

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Card Number: 30
Field Length: 51 characters

Comment Flag: Indicates the left (L) or right (R) half of a comment line. Each half contains 51 characters.

Card Number: 30
Valid Codes: L - Left half
R - Right half
Field Length: 1 character

Compliance Schedule: The year and month by which the source must be in compliance. Used for sources with compliance status of 2 or 3 (not in compliance).

Card Number: 12
Valid Codes: The field must be numeric. The year (first two characters) must not be more than 5 years greater than the year entered on the option card.
Field Length: 4 characters

Compliance Status: Indicates the present status of the source under existing legislation.

Card Number: 12
Valid Codes: 1 - Source is in compliance with existing legislation.
2 - Source is not in compliance, and no variance has been given.
3 - Source is not in compliance, but a variance has been given.
4 - Compliance status is unknown.
Field Length: 1 character

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Compliance Update: Indicates the date (year, month, and day) of the most recent change in the compliance status of the source. The field should be blank for sources with compliance status of 4 (unknown).

Card Number: 12

Valid Codes: The field must be numeric. The year (first two characters) must not be greater than the year entered on the option card.

Field Length: 6 characters

Confidentiality: Indicates whether or not data for this source is considered confidential; that is, not to be released to the public.

Card Number: 22

Valid Codes: 1 - Source is confidential.
2 - Source is not confidential.

Field Length: 1 character

Contact: The last name of the person responsible for the pollution control activity at the source. If an individual is not identified, a position title should be given.

Card Number: 01

Field Length: 15 characters

Control Equipment Cost: The annual cost of maintenance and operation of pollution control equipment.

Card Number: 13

Valid Codes: The field must be numeric.

Field Length: 7 characters with 2 decimal positions assumed

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Control Regulations: Identifies the air pollution control regulations that are in effect and apply to the source.

Card Number: 12
Valid Codes: The field must be numeric.
Field Length: 12 characters

County: The county code associated with the source.

Card Number: All transactions
Valid Codes: Refer to the AEROS Manual Series, Volume V: AEROS Manual of Codes, Section 2.2.0 for a complete list of county codes.
Field Length: 4 characters

Date: The Julian date of the information recorded in the transaction. The format is YYDDD, where YY represents the year and DDD represents the day.

Card Number: All transactions
Valid Codes: The year (first two characters) must not be greater than the option date year. The day must be between 000 and 366.
Field Length: 5 characters

ECAP: Indicates the status of the ECAP (emergency control action program) for the source.

Card Number: 12
Valid Codes: 0 - ECAP is not required
1 - ECAP required but not submitted
2 - ECAP has been submitted

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Field Length: 1 character

EMF Origin: Indicates the origin of the emission factor information.

Card Number: 23

Valid Codes: F - Federal
S - State
L - Local

Field Length: 1 character

EMF Source: A user-defined code to specify individual local emission factor information.

Card Number: 23

Field Length: 1 character

EMF Units: This field is not used at present; in the future this field will allow emission factors to be coded in units other than the NEDS units.

Card Number: 23

Field Length: 1 character

Emission Factor: A statistical average of the rate at which a pollutant is released into the atmosphere as a result of some activity.

Card Number: 23

Valid Codes: The field must be numeric. The emission factors for each SCC can be found in Compilation of Air Pollutant Emission Factors, EPA Publication No. AP-42.

Field Length: 9 characters with 3 decimal positions assumed

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Emissions Units: This field is not used at present; in the future this field will allow emissions to be coded in units other than the NEDS units.

Card Number: 13
Field Length: 1

Estimated Control Efficiency: The overall collection efficiencies in weight percentage of all control equipment at the source. Assume that the pollutant load entering the control equipment is the normal, uncontrolled quantity for that specific process.

Card Number: 13
Valid Codes: The field must be numeric.
Field Length: 3 characters with one decimal position assumed

Estimated Emissions: The annual, controlled emissions from the point source in tons per year.

Card Number: 13
Valid Codes: The field must be numeric. Values under 25,000 tons per year are valid. Values between 25,001 and 800,000 tons per year cause a conditional message to be printed but are accepted. Values above 800,000 are rejected.
Field Length: 7 characters

Estimation Method: Indicates the method used to ascertain the estimated emissions.

Card Number: 13
Valid Codes: 0 - Not applicable (emissions are negligible)
1 - Stack test results or other emission measurement
2 - Material balance

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

3 - Calculated using the Federal emission factor
4 - Guess
5 - Calculated using a special emission factor other than that given for the SCC
6 - New construction, not yet operational
7 - Facility closed, operations ceased

Field Length: 1 character

Exhaust Flow Rate: The total volume in cubic feet per minute of exhaust gas released at the operating temperature and normal atmospheric pressure. The value is given in cubic feet per minute. Design or maximum exhaust-gas volume can be used if actual measurements are not available.

Card Number: 12
Valid Codes: The field must be numeric.
Field Length: 7 characters

Fuel Process Rate: The average annual fuel, process, or solid waste operating rate. The emission factor file prescribes the units to be used for each SCC.

Card Number: 21
Valid Codes: The field must be numeric.
Field Length: 7 characters

Fuel Units: This field is not used at the present time. Future expansion of the system will allow the user to specify the fuel process rate in units other than the NEDS units.

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Card Number: 21
Field Length: 1 character

Heat Content: The heat content for combustion processes, specified in millions of BTU per SCC.
Card Number: 21
Valid Codes: The field must be numeric.
Field Length: 5 characters

IPP Code: Identifies the implementation planning program process (IPP).
Card Number: 11
Valid Codes: The field must be numeric. Refer to the AEROS Manual Series Volume V: AEROS Manual of Codes, Section 3.2.0 for a full list of IPP codes.
Field Length: 2 characters

Latitude: The latitude of a point source. Coordinates can be obtained from a USGS map.
Card Number: 11
Valid Codes: The field must be numeric.
Field Length: 6 characters

Local Control: Allows the user to identify plants that are physically located in one control region, but whose control is under the jurisdiction of another control region.
Card Number: 01
Field Length: 2 characters

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Longitude: The longitude of a point source. Coordinates can be obtained from a USGS map.

Card Number: 11

Valid Codes: The field must be numeric.

Field Length: 7 characters

Mailing Address: The address to contact as opposed to the establishment name and address.

Card Number: 03

Field Length: 48 characters

Maximum Design Rate: The maximum hourly design rate of the most important process equipment, or the upper operating limit that generally would not be exceeded in normal practice. Units are the NEDS units for the SCC for the process, expressed as an hourly rate.

Card Number: 21

Valid Codes: The field must be numeric.

Field Length: 7 characters with 3 decimal positions assumed

Measured Emissions: The actual measured annual, controlled emissions in tons per year.

Card Number: 13

Valid Codes: The field must be numeric.

Field Length: 7 characters

Name and Address: A descriptive name for the plant and a usable mailing address.

Card Number: 02

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Field Length: 48 characters

NEDS P7 Comment: Information to be entered on a NEDS P7 card.
Card Numbers: 04 - plant comment
14 - point comment
24, 25 - SCC comment
Field Length: 52 characters on 04 and 14 cards, 26 characters on 24 and 25 cards

NEDS Point ID: A sequential number used to designate an emission point within the plant.
Card Number: 11 - 30
Valid Codes: Field must be all numeric or all alphabetic. Numbers will sort first, beginning with 00.
Field Length: 2 characters

Normal Operating Rate: The first two digits indicate the hours per day of normal operation; the third digit, the days per week; and the last two, the weeks per year.
Card Number: 11
Valid codes: Hours: 0 - 24
Days: 0 - 7
Weeks: 0 - 52
Field Length: 5 characters

Number of Employees: The number of persons who work at the plant.
Card Number: 02
Valid Codes: The field must be numeric.
Field Length: 4 characters

(Page 12 of 21)

Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Ownership Code: The NEDS code used to designate the type of ownership.

Card Number: 01

Valid Codes: P - Private
L - Local government
S - State government
F - Federal government
U - Utility

Field Length: 1 character

Percentage Annual Thruput: The field is divided into four three-month periods representing one year. Each subfield contains the weighted percentage of the yearly activity for that period. If all activity occurs in one period, enter 99 for that period and zeroes for the other periods.

Card Number: 11

Valid Codes: The field must be numeric. The four quarterly percentages should add up to 95-105%.

Field Length: 8 characters

Plant ID: Identifies the source (plant) within a county. Plant ID's are assigned sequentially by county.

Card Number: All transactions

Valid Codes: The field must not contain blanks but can contain numbers or letters. Numbers will sort first, beginning with 0000.

Field Length: 4 characters

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Plume Height: A gross estimate (in feet) of source volume when the source has no definable stack. This field must be coded for an add transaction if the stack information is blank.

Card Number: 12
Valid Codes: The field must be numeric. Values greater than 200 will cause a conditional message to be printed.
Field Length: 4 characters

PNR Line Number: Each point can have up to 99 comments, which are identified by a PNR sequence number. Each of those comments can contain up to 999 lines, which are identified by a PNR line number. Each line of comment is an individual record in the EIS/PS master file and can be added, changed, or deleted. Lines are numbered sequentially within an individual comment (PNR sequence number).

Card Number: 30
Valid Codes: 001 - 999
Field Length: 3 characters

PNR Sequence Number: Identifies a comment for a point. Each point can have up to 99 comments, which are numbered sequentially by a PNR sequence number. Each comment can contain up to 999 lines, which are identified by a PNR line number. Comments are added and changed by line number. Individual lines can be deleted, or an entire comment can be deleted by specifying a PNR line number of 000.

Card Number: 30
Valid Codes: 01 - 99
Field Length: 2 characters

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Point Pollutant ID: The SAROAD parameter code for the pollutant whose emissions are being measured.

Card Number: 13

Valid Codes: The field must be numeric. Refer to AEROS Manual Series, Volume V: Manual of Codes for a listing of SAROAD parameter codes.

Field Length: 5 characters

Points with Common Stack: Indicates the range of points using a common stack. Points which discharge through a common stack must be numbered sequentially, and all of the points must exist. The first two characters of the field indicate the NEDS point ID of the point with the lowest number in the group and the last two characters indicate the point whose ID is the highest. For a complete definition of common stack, see AEROS Manual Series, Volume V: Manual of Codes.

Card Number: 12

Valid Codes: Each of the two points represented must be valid point ID's; that is, they must be all numeric or all alphabetic and contain no blanks. Also, the NEDS point ID must not be less than the lower point nor greater than the upper point.

Field Length: 4 characters

Primary Control Equipment: The Control Equipment Identification code for control devices. Report only control devices that reduce the uncontrolled emissions normally associated with the specific source.

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Card Number: 13
Valid Codes: See Appendix A, Table A-2.
Field Length: 3 characters

Principal Product: Describes the principal product produced by the plant.
Card Number: 01
Field Length: 10 characters

Property Area: The area, to the nearest tenth of an acre, of the land occupied by the facility.
Card Number: 02
Valid Codes: The field must be numeric.
Field Length: 6 characters with one decimal position assumed

SCC: The source classification code that describes the process.
Card Number: 21 - 25
Valid Codes: Refer to AEROS Manual Series, Volume V: AEROS Manual of Codes, Section 3.7.0 for SCC's.
Field Length: 8 characters

SCC Pollutant ID: The SAROAD parameter code for the pollutant whose emission factor information is being recorded.
Card Number: 23
Valid Codes: Refer to AEROS Manual Series, Volume V: AEROS Manual of Codes for a listing of SAROAD parameter codes.
Field Length: 5 characters

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

SCC Sequence Number: Allows the user to specify duplicate SCC's for a given point. If only one record is needed for an SCC, the SCC sequence number should be 00. Additional records can be numbered sequentially.

Card Number: 21 - 25
Valid Codes: The field must be numeric.
Field Length: 2 characters

Secondary Control Equipment: Used in conjunction with the primary control equipment field to indicate an additional control device for the point.

Card Number: 13
Valid Codes: See Appendix A, Table A-2.
Field Length: 3 characters

SIC Code: Identifies the Standard Industrial Classification code associated with the point.

Card Number: 11
Valid Codes: SIC codes can be found in the Standard Industrial Classifications Manual, 1973.
Field Length: 4 characters

Source Code: Identifies the process category for the SCC.

Card Number: 22
Valid Codes: B - Boiler
P - Process

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

C - Other combustion unit
S - Solid waste
Field Length: 1 character

Source Description: A brief description of the source. This field can also be used for comments. The field must be coded for SCC's ending in 97, 98, or 99.
Card Number: 22
Field Length: 25 characters

Space Heat Percentage: Indicates the percentage of total fuel used for space heating the plant. If no fuel is used for space heating, enter zeroes.
Card Number: 11
Valid Codes: The field must be numeric.
Field Length: 3 characters with one decimal position assumed

Stack Diameter: The inside diameter (in feet) of a round gas exit at the point of emission. If the exit is not round, an equivalent stack diameter is calculated from the cross-sectional area at the point of discharge, using the equation $D=1.128\sqrt{A}$, the A is the cross-sectional area in square feet and D is the equivalent diameter.
Card Number: 12
Valid Codes: The field must be numeric. A conditional message will be printed if the stack diameter is greater than .2 times the stack height.
Field Length: 3 characters with one decimal position assumed

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Stack Height: The vertical distance in feet between the point of discharge and the ground level where it can be identified. If no stack is defined, code only the plume height information and leave the stack information blank.

Card Number: 12

Valid Codes: The field must be numeric. A conditional message will be printed if the stack height is over 500 feet.

Field Length: 4 characters

Stack Temperature: The temperature of the exhaust stream at the stack exit. Stack temperature should be the temperature, in degrees Fahrenheit, under normal operating conditions.

Card Number: 12

Valid Codes: The field must be numeric. A conditional message will be printed if the stack temperature is less than 77^{0} or greater than 2000^{0}.

Field Length: 4 characters

State: The state identification code for the plant.

Card Number: All transactions

Valid Codes: Refer to AEROS Manual Series, Volume V: AEROS Manual of Codes, Section 2.1.0.

Field Length: 2 characters

Sulfur Content: The sulfur content for combustion processes, indicated as a weight percentage.

Card Number: 21

Valid Codes: The field must be numeric.

Field Length: 3 characters with 2 decimal positions assumed

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Telephone: The telephone number (including area code) of the person listed in the contact field.

Card Number: 01
Valid Codes: The field must be numeric.
Field Length: 10 characters

Test Method: A user-defined code for the method used to ascertain the measured emissions.

Card Number: 13
Valid Codes: The field must be numeric.
Field Length: 1 character

User Control Region: A user-defined field to identify state or local control areas.

Card Number: 01
Field Length: 3 characters

User Plant ID: A user-defined field that is used if local plant identification differs from the NEDS conventions.

Card Number: 01
Field Length: 12 characters

User Point ID: A user-defined point source identification which may differ from the NEDS conventions.

Card Number: 11
Field Length: 3 characters

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

UTM Horizontal Coordinate: The horizontal (or easting) coordinate for the UTM (Universal Transversal Mercator Projection System) measurement of the source. UTM coordinates can be obtained from USGS maps.

Card Number: 11
Valid Codes: See Appendix A, Table A-1.
Field Length: 4 characters with one decimal position assumed

UTM Vertical Coordinate: The vertical (or northing) coordinate for the UTM measurement of the source. UTM coordinates can be obtained from USGS maps.

Card Number: 11
Valid Codes: See Appendix A, Table A-1.
Field Length: 5 characters with one decimal position assumed

UTM Zone: The zone associated with the UTM coordinates given for the source. UTM coordinates can be obtained from USGS maps.

Card Number: 01
Valid Codes: See Appendix A, Table A-1.
Field Length: 2 characters

Velocity: The exhaust-gas velocity for the point. If the actual measurement is not available, use the design or maximum value.

Card Number: 12
Valid Codes: The field must be numeric.
Field Length: 5 characters

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Figure 4.3.5-b - continued. Definition of EIS/PS Master File Transaction Fields

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	Key State
3 - 6	4	Numeric	Key County
7 - 9	3	Numeric	Key AQCR
10 - 17	8	Numeric	Key Plant ID (Modified to Base 36)
18 - 21	4	Numeric	Key NEDS Point ID (Modified to Base 36)
22	1	Numeric	Key Segment Type
23 - 30	8	Numeric	Key SCC
31 - 32	2	Numeric	Key SCC Sequence Number
33 - 34	2	Numeric	Key PNR Sequence Number
35 - 37	3	Numeric	Key PNR Line Number
38 - 39	2	Numeric	Key Card Number
40	1	Numeric	Key Action Code
41 - 120	80	Numeric	Original Input Transaction

Figure 4.3.5-c. EIS/PS Internal Transaction Format

```
                        EIS/PS MASTER FILE TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                PAGE    1

PROGRAM NAME: PEDMSTR (EP0080)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT: FLAGA     LIST
CONTROL YEAR: 80

06196005300018000470101111141212454095557121210515152020303011054700137097      11A
                                   H  E                H   E
          *** PEDMSTR 034 CONDITIONAL - COLUMN 34 - UTM-VERTICAL CODE OUT OF RANGE
          *** PEDMSTR 093 CONDITIONAL - COLUMN 52 - INVALID THRUPUT SUM

0619600530001800047 01  90 10 100     125  150 9000101281107912151  40  15  17  12A
                                             H  EH  F
          *** PEDMSTR 050 CONDITIONAL - COLUMN 48 - PLUME HEIGHT IS GREATER THAN 200
          *** PEDMSTR 052 CONDITIONAL - COLUMN 48 - 1ST POINT GREATER THAN OR EQUAL TO 2ND POINT
          *** PEDMSTR 100 CONDITIONAL - NEDS POINT ID NOT WITHIN COMMON STACK POINTS

06196005300018001131401111141212454095557121210515152020303011054700137097      11A
                                   H  E                H   E
          *** PEDMSTR 034 CONDITIONAL - COLUMN 34 - UTM-VERTICAL CODE OUT OF RANGE
          *** PEDMSTR 093 CONDITIONAL - COLUMN 52 - INVALID THRUPUT SUM


NUMBER OF TRANSACTIONS READ:                        239
NUMBER OF INTERNAL TRANSACTIONS WRITTEN:            236
NUMBER OF TRANSACTIONS REJECTED:                      3
NUMBER OF ABORT MESSAGES:                             0
NUMBER OF ERROR MESSAGES:                             3
NUMBER OF CONDITIONAL MESSAGES:                      36
NUMBER OF WARNING MESSAGES:                           0

PROGRAM NAME: PEDMSTR (EP0080)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

Figure 4.3.5-d. Diagnostic Report

```
                               INPUT EIS/PS MASTER FILE TRANSACTIONS                        PAGE    1

0619600530001800/12304PL-3175       001212PFRANKE SMYTHE  591958437698ENGINES  01A
06196005300018004/SMYTHE ENGINE CO                                     14    19 02A
06196005300018004/RED OAKE, COLORADO                                            03A
06196005300018004/PLANT NOT IN PRODUCTION 12/79 THRU /4/80                      08A
06196005300018004/01011114121245409555712121051515202030301105470013709 7      11A
06196005300018004/01  90 10 100     123  150 900010128110791215 1  44  15  17  12A
06196005300018004/0142101     100022041985    100    200     300433             13A
06196005300018004/0111101     100022041985    100    200     300433             13A
06196005300018004/01POINT ADDED 12/14/79                                        14A
06196005300018004/01403001010012301 2   5000   4000912201  150LB                21A
06196005300018004/0140300101001ENGINE                                           22A
06196005300018004/01403001010OLH11101      3241A122104      41552               23A
06196005300018004/01403001010OLH42101      3241A142602      41552               23A
06196005300018004/014030010100SCC LEFT COMMENT P7                               24A
06196005300018004/014030010100SCC RIGHT P7 COMMENT                              25A
06196005300018004/0140300102021230 12   5000   4000912201  150LB                21A
06196005300018004/01403001020 21ENGINE                                          22A
06196005300018004/014030010202LH42101      3241A142602      41552               23A
06196005300018004/014030010202LH11101      3241A122104      41552               23A
06196005300018004/014030010202SCC LEFT COMMENT P7                               24A
06196005300018004/0102021R WILL BE CITED 3/1/80                                 30A
06196005300018004/0102021LPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/7930A
0619600530001801135140111141212454095557121210515152020303011054700137097      11A
061960053000180113514  90 10 100     123  151 9001020281107912151  44  15  17  12A
0619600530001801135142101     100022041985    100    200     300433             13A
0619600530001801135141 1101     100022041985    100    200     300433           13A
06196005300018011351 4POINT ADDED 12/14/79                                      14A
06196005300018011351403001010012301 2   5000   4000912201  150LB                21A
0619600530001801135140300101001ENGINE                                           22A
061960053000180113514030010100LH42101      3241A142602      41552               23A
061960053000180113514030010100LH11101      3241A122104      41552               23A
0619600530001801135140300101 00SCC LEFT COMMENT P7                              24A
06196005300018011351403001010 0SCC RIGHT P7 COMMENT                             25A
06196005300018011351403001020212301 2   5000   4000912201  150LB                21A
061960053000180113514030010202 1ENGINE                                          22A
061960053000180113514030010202LH11101      3241A122104      41552               23A
061960053000180113514030010202LH42101      3241A142602      41552               23A
061960053000180113514030010202SCC LEFT COMMENT P7                               24A
0619600530001801135102021R WILL BE CITED 3/1/80                                 30A
0619600530001801135102021LPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/7930A
06196005300418014/12304PL-3175       001212PGEORGE SMYTHE  621958437698PLANTS  01A
06196005300418004/SMYTHE ENGINE CO                                     14    19 02A
06196005300418014/UTILITIES, COLORADO                                           03A
06196005300418004/PLANT NOT IN PRODUCTION 12/79 THRU /4/80                      08A
06196005300418014/010111141212454095557121210515152020303011058700137097       11A
06196005300418014/01  90 10 100     123  152 9000101281107912151  44  15  17   12A
06196005300418014/0142101     230022041985    230    200     300433             13A
06196005300418014/0143101     230022041985    230    200     300433             13A
06196005300418014/01POINT ADDED 12/14/79                                        14A
```

Figure 4.3.5-e. Input Transaction Listing

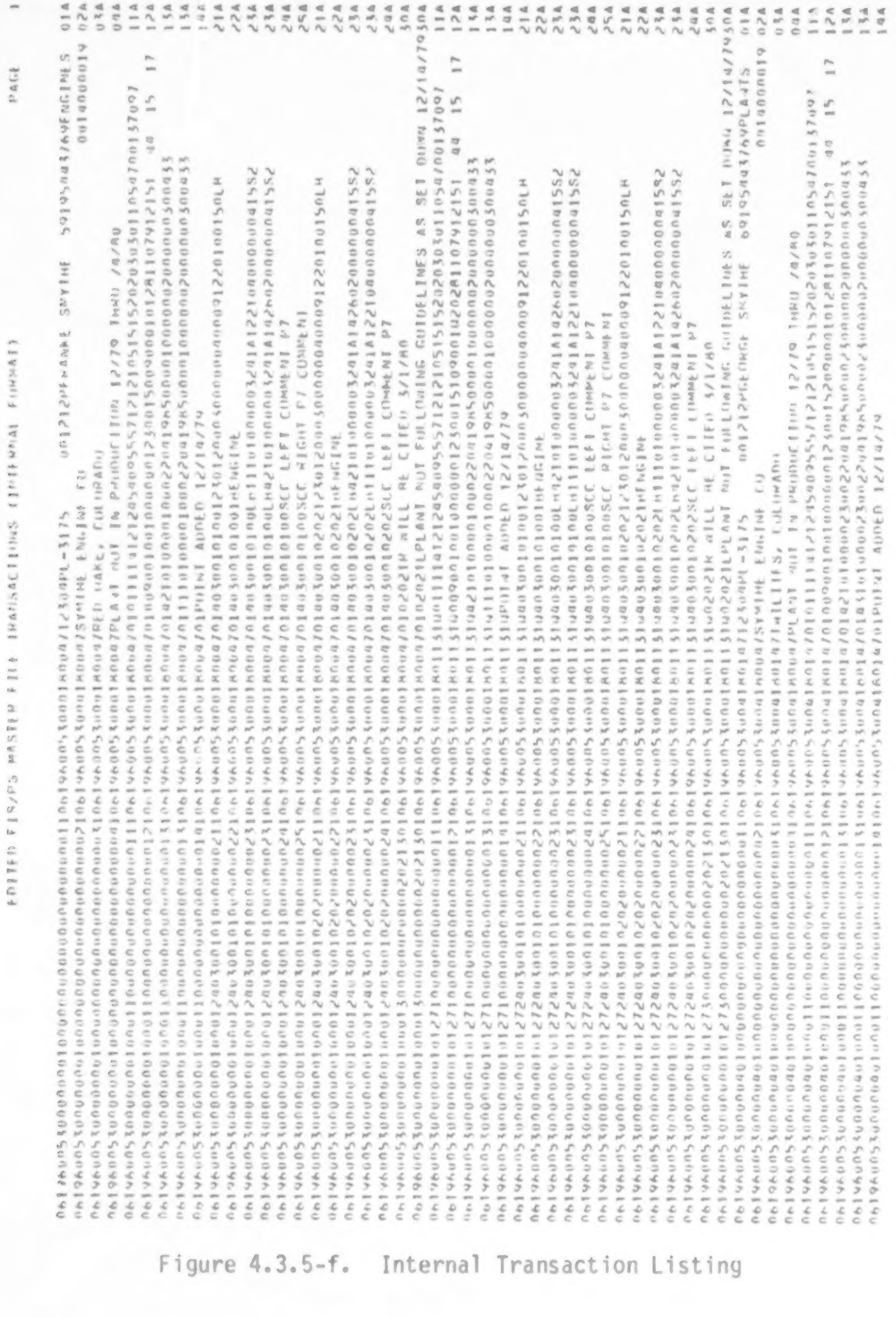
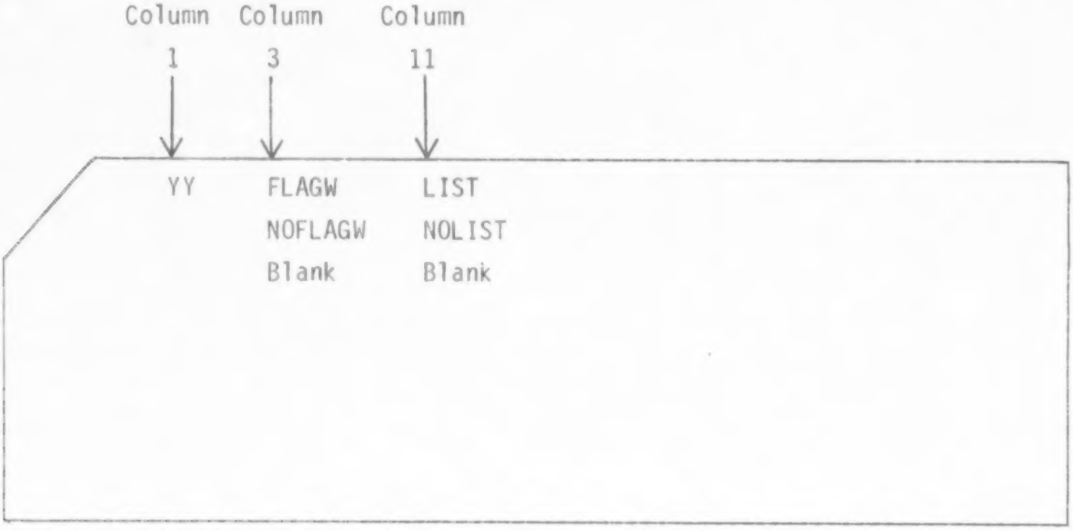


Figure 4.3.5-f. Internal Transaction Listing



Note: YY must be a number indicating the year to be used for editing the transactions.

Figure 4.3.5-g. Option Card Format

```
//* EPALMH/A087 HEDGEPETH, LLOYD 4. (919) 541-5491
//*
//*   PROCEDURE NAME: EPEDT10
//*   REVISION LEVEL: 1-00
//*   LAST UPDATE #: P-1
//*   DATE INCORPORATED: FEBRUARY 1, 1980
//*
//*   THIS PROCEDURE ALLOWS THE USER TO EDIT EIS/PS MASTER FILE
//*   TRANSACTIONS AND CATALOG THE EDITED TRANSACTIONS
//*
//*
//EPEDT10 PROC PROJECT='CN.EPALMH.A087.CDHS.HQ.PMI',
//             PROG1=ESRMTR,
//             PROG2=PEDMSTR,
//             REGION1=150K,
//             REGION2=100K,
//             TIME1='1,0',
//             TIME2='1,0',
//             INTERRO=EPEDTERR,
//             UNIT=3330,
//             SERIAL=CDHSPK,
//             DISP='NEW,CATLG,DELETE',
//             SPCUNIT=TRK,
//             PRIMARY=20,
//             SECONDRY=10,
//             TEMP=SYSDA,
//             WORKSPC='20,10',
//             OUT=A
//*
//SORT    EXEC  PGM=&PROG1,
//             REGION=&REGION1,
//             TIME=(&TIME1)
//*
//* SORT EIS/PS MASTER FILE TRANSACTIONS INTO FILE SEQUENCE
//*
//STEPLIB   DD DSNAME=&PROJECT..LOAD,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//SORTLIB   DD DSNAME=SYS1.SORTLIB,
//             DISP=(SHR,PASS)
//*
//SORTWK01  DD UNIT=&TEMP,
//             SPACE=(TRK,(&WORKSPC),,CONTIG)
//*
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),
//             SPACE=(TRK,(&WORKSPC),,CONTIG)
//*
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),
//             SPACE=(TRK,(&WORKSPC),,CONTIG)
//*
//* INPUT DATA SET - MASTER FILE TRANSACTIONS
//*
//EPSINPT   DD DDNAME=INPUT,
//             DCB=BLKSIZE=80
//*
//* OUTPUT DATA SET - SORTED MASTER FILE TRANSACTIONS
```

(Page 1 of 3)

Figure 4.3.5-h. Cataloged Procedure EPEDT10

```
//*                                                                     00005700
//EPSOUTP   DD DSNAME=&&SORTED,                                         00005800
//             UNIT=&TEMP,                                              00005900
//             DISP=(NEW,PASS,DELETE),                                  00006000
//             SPACE=(TRK,(&WORKSPC),RLSE)                              00006100
//*                                                                     00006200
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00006300
//*                                                                     00006400
//EPSDIAG   DD SYSOUT=&OUT                                              00006500
//*                                                                     00006600
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00006700
//*                                                                     00006800
//SYSPRINT  DD SYSOUT=&OUT                                              00006900
//*                                                                     00007000
//SYSOUT    DD SYSOUT=&OUT                                              00007100
//*                                                                     00007200
//SYSDBOUT  DD SYSOUT=&OUT                                              00007300
//*                                                                     00007400
//SYSDTERM  DD SYSOUT=&OUT                                              00007500
//*                                                                     00007600
//SYSUDUMP  DD SYSOUT=&OUT                                              00007700
//*                                                                     00007800
//*                                                                     00007900
//EDIT     EXEC PGM=&PROG2,                                             00008000
//             REGION=&REGION2,                                         00008100
//             TIME=(&TIME2)                                            00008200
//*                                                                     00008300
//* EDIT EIS/PS MASTER FILE TRANSACTIONS                                00008400
//*                                                                     00008500
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00008600
//             VOLUME=(PRIVATE,RETAIN),                                 00008700
//             DISP=(SHR,PASS)                                          00008800
//*                                                                     00008900
//* INPUT DATA SET - SORTED MASTER FILE TRANSACTIONS                    00009000
//*                                                                     00009100
//EPSTRAN   DD DSNAME=&&SORTED,                                         00009200
//             DISP=(SHR,PASS)                                          00009300
//*                                                                     00009400
//* INPUT DATA SET - OPTION CARD                                        00009500
//*                                                                     00009600
//EPSOPTN   DD DDNAME=OPTIONS,                                          00009700
//             DCB=BLKSIZE=80                                           00009800
//*                                                                     00009900
//* OUTPUT DATA SET - EDITED MASTER FILE INTERNAL TRANSACTIONS          00010000
//*                                                                     00010100
//EPSINTR   DD DSNAME=&PROJECT..DATA.&INTRTRN,                          00010200
//             VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                     00010300
//             DISP=(&DISP),                                            00010400
//             UNIT=&UNIT,                                              00010500
//             SPACE=(&SPCUNIT,(&PRIMARY,&SECONDRY),RLSE)               00010600
//*                                                                     00010700
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00010800
//*                                                                     00010900
//EPSDIAG   DD SYSOUT=&OUT                                              00011000
//*                                                                     00011100
//* OUTPUT DATA SET - MASTER FILE TRANSACTION LISTING                   00011200
```

(Page 2 of 3)

Figure 4.3.5-h - continued. Cataloged Procedure EPEDT10

```
//*                                                                     00011300
//EPSTRNI   DD SYSOUT=&OUT                                              00011400
//*                                                                     00011500
//* OUTPUT DATA SET - MASTER FILE INTERNAL TRANSACTION LISTING          00011600
//*                                                                     00011700
//EPSINIT   DD SYSOUT=&OUT                                              00011800
//*                                                                     00011900
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00012000
//*                                                                     00012100
//SYSPRINT  DD SYSOUT=&OUT                                              00012200
//*                                                                     00012300
//SYSOUT    DD SYSOUT=&OUT                                              00012400
//*                                                                     00012500
//SYSDBOUT  DD SYSOUT=&OUT                                              00012600
//*                                                                     00012700
//SYSDTERM  DD SYSOUT=&OUT                                              00012800
//*                                                                     00012900
//SYSUDUMP  DD SYSOUT=&OUT                                              00013000
//*                                                                     00013100
//*                                                                     00013200
```

(Page 3 of 3)

Figure 4.3.5-h - continued. Cataloged Procedure EPEDT10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPINTERN would be the full data set name of the internal transaction file)
PROG1	PSRMFTR	Master file transaction sort program
PROG2	PEDMSTR	Master file transaction edit program
TIME1	'1,0'	Time allocated for execution of PSRMFTR
TIME2	'1,0'	Time allocated for execution of PEDMSTR
UNIT	3330	Unit type to which edited internal transactions are to be written
SERIAL	CDHSPK	Volume identification to which edited internal transactions are to be written
DISP	'NEW,CATLG, DELETE'	Disposition of edited internal transactions
SPCUNIT	TRK	Units in which space for edited internal transactions is to be allocated
PRIMARY	20	Primary space allocation for edited internal transactions
SECNDRY	10	Secondary space allocation for edited internal transactions
INTRTRN	EPINTERN	Lowest-level index of data set to contain edited internal transactions
OUT	A	SYSOUT class for all print files
REGION1	150K	Region size allocated for execution of PSRMFTR
REGION2	100K	Region size allocated for execution of PEDMSTR
TEMP	SYSDA	Unit type for temporary work space
WORKSPC	'20,10'	Space allocated for sort work files

Figure 4.3.5-i. Substitutable Parameters for EPEDT10

4.3.6 MASTER FILE INTERNAL TRANSACTION PRE-INSERTION SORT PROGRAM - PSREFIN (EP0090)

4.3.6.1 Description

PSREFIN (EP0090) sorts master file internal transactions into the sequence required by the master file internal transaction emission factor insertion program, PMSEFIN (EP0100); Figure 4.3.6-a details this sort order. All master file internal transactions must be sorted by PSREFIN (EP0090) before they can be used as input to PMSEFIN (EP0100). See Section 4.3.5 for additional information on the internal transactions.

4.3.6.2 File Formats

Input to this program consists of master file internal transactions generated by PCENETR (EP0060), the NEDS to EIS/PS master file transaction conversion-edit program; PEDMSTR (EP0080), the master file transaction edit program; or PMSEFGN (EP0130), the master file emission factor transaction generator program. Refer to Figure 4.3.5-c for the internal transaction format.

PSREFIN (EP0090) produces two output files: a diagnostic report and a temporary file containing the sorted transactions. The output transactions differ from the input internal transactions in that the sort key has been appended to the front of the internal transaction. The output transactions are in the required sequence for use as input to the master file internal transaction emission factor insertion program, PMSEFIN (EP0100). An example of the diagnostic report is shown in Figure 4.3.6-b.

4.3.6.3 Options and Control Cards

There are no options.

4.3.6.4 Error Messages

There are no error messages.

4.3.6.5 Cataloged JCL

PSREFIN (EP0090) should always be executed in conjunction with the master file internal transaction emission factor insertion program, PMSEFIN (EP0100). See Section 4.3.7.5 for a discussion of the cataloged procedure EPMST10, which executes both programs.

4.3.6.6 Warnings and Special Instructions

Note that the COBOL sort verb is used in this program; therefore, the collating sequence for alphanumeric fields is determined by the computer at the user's particular installation.

In addition to the diagnostic report produced by PSREFIN (EP0090), messages generated by the sort-merge package will be printed. The format and content, as well as the physical location, of these messages depend upon the user's particular installation.

4.3.6.7 Cost Considerations

The following estimates are for the execution of PSREFIN (EP0090) on an IBM 370/168:

Number of internal transactions:	576 records
CPU time:	1.20 seconds
I/O time:	2.93 seconds
Total time:	4.17 seconds
Estimated cost:	$.58

4.3.6.8 Related Programs and Procedures

PSREFIN (EP0090) should always be executed in conjunction with the master file internal transaction emission factor insertion program, PMSEFIN (EP0100). The cataloged procedure EPMST10 executes both programs.

There are three other cataloged procedures which execute PSREFIN (EP0090) and PMSEFIN (EP0100). The cataloged procedure EPEMM10 can be used to maintain the master file with EIS/PS master file transactions as input. See Section 4.4.3 for a discussion of this procedure. To maintain the master file using NEDS master file transactions, the cataloged procedure EPFMM20 can be executed. See Section 4.4.4. To maintain the master file using emission factor transactions, the cataloged procedure EPFMM30 can be used. Refer to Section 4.4.5 for a discussion of EPFMM30.

Record Position	Description	Sort Sequence
23 - 30	SCC	Ascending
102	Origin	Ascending
103	Source	Ascending
71 - 75	Pollutant ID	Ascending

Figure 4.3.6-a. Insertion Sort Sequence for Master File Internal Transactions

```
              EIS/PS MASTER FILE INTERNAL TRANSACTION PRE-INSERTION SORT PROGRAM  -  DIAGNOSTIC REPORT            PAGE 1


PROGRAM NAME: PSREFIN (EP0090)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS:      576
NUMBER OF OUTPUT TRANSACTIONS:     576
```

Figure 4.3.6-b. Diagnostic Report

4.3.7 MASTER FILE INTERNAL TRANSACTION EMISSION FACTOR INSERTION PROGRAM - PMSEFIN (EP0100)

4.3.7.1 Description

Emission factor information from the EIS/PS emission factor file can be inserted into the type 21 and 23 internal transactions by executing PMSEFIN (EP0100) after the internal transactions have been created by either PEDMSTR (EP0080) or PCENETR (EP0060). The information to be inserted, as well as the conditions for insertion, are specified by the user via an option card (see Section 4.3.5.3). Note that the internal transactions must be sorted by the master file internal transaction pre-insertion sort program, PSREFIN (EP0090), before they can be input to PMSEFIN (EP0100).

PMSEFIN (EP0100) matches the type 23 internal transactions to the emission factor file records by SCC number, origin, source, and pollutant ID. It matches the type 21 internal transactions by SCC number, origin, and source to emission factor file records which have pollutant ID's of zero and contain the ash and sulfur contents for their respective SCC number. If an internal transaction has a source of 'H', (hand calculate) no insertion will be made into that transaction.

If a matching emission factor file record is found for an internal transaction, the information in that record is inserted into the appropriate fields of the transaction (see Figure 4.3.7-a for a list of the valid fields for insertion). If the user submits a type 23 internal transaction containing a pollutant ID of zero, PMSEFIN (EP0100) will create a type 23 internal transaction to correspond to each pollutant ID contained in the emission factor file for that SCC, origin, and source combination. No changes are made to any of the other input internal transactions. The output file created by

PMSEFIN (EP0100) is not in master file sequence and must be sorted by the master file internal transaction sort program, PSRINTR (EP0110), prior to being input to the master file maintenance program, PFMMSTR (EP0120).

4.3.7.2 File Formats

PMSEFIN (EP0100) uses three input files: the file of sorted EIS/PS master file internal transactions, the EIS/PS emission factor file, and an option card. See Figure 4.3.5-c for the format of the internal transaction file and Figure 4.2.5-a for that of the emission factor file. The option card is discussed in Section 4.3.7.3.

Two output files are produced: the file of completed internal transactions and a diagnostic report. The output transactions have the same format and are in the same sequence as the input transactions; they must be sorted by PSRINTR (EP0110) before being input to PFMMSTR (EP0120) to update the master file.

The diagnostic report contains the update messages, program statistics, option messages, and error messages. A heading is printed on each page of the diagnostic report to indicate the selected insertion fields and conditions. See Figure 4.3.7-b for a sample diagnostic report.

4.3.7.3 Options and Control Cards

The user can specify, via an option card, the transaction fields for insertion and can specify whether or not data from the emission factor file should override (i.e., replace) existing data in any of those fields. He can also specify whether or not emission factor file data must satisfy a date criterion, whether or not the input internal transactions must satisfy a date criterion, whether or not the date of the internal transactions is to be replaced by the date of the emission factor information, and whether or not warning messages should be printed. All options are specified in fixed fields on the option card. See Figure 4.3.7-c for the format of the option card.

A transaction field is specified for insertion by coding its identifier and an 'I' in the appropriate option card field. The valid fields for insertion and their identifiers are as follows:

Field	Identifier
Sulfur Content	SUL
Ash Content	ASH
Emission Factor	EMISSION

The emission factor field is the default insertion field if no valid fields are specified for insertion.

If a valid transaction field has been specified for insertion, that field must be blank for any data to be inserted. If the user desires to insert data into a field regardless of its content, he can specify an override for that field by coding an 'O' in the appropriate option card field. If an override is specified for a particular field, any data in that field will be replaced with data from the matching emission factor file record.

A date criterion can be established for the emission factor file data by coding a date identifier of 'EDAT' and a date value. The date value is expressed as a Julian date; that is, as a 5-character number, the first two digits of which represent the year, and the last three the day within the year. No insertion will be made into a field if the date of the matching emission factor file record is prior to the specified date. If no date criterion is specified, insertions will be made regardless of the date of the emission factor file data.

Likewise, a date criterion can be established for the input internal transactions by coding a date identifier of 'TDAT' and a date value. No insertion will be made into any transaction with a date prior to this date. If no date criterion is specified, insertions into the transactions will be made regardless of their dates.

If the user desires to replace the date of each transaction with the date of the matching emission factor file record, he can do so by coding 'R' in column 80 of the option card. Otherwise, no change will be made in the date of the transaction.

If 'FLAGW' is coded in the warning message suppression field of the option card, all warning messages will be printed in the diagnostic report; if 'NOFLAGW' is coded, no warning messages will be printed. If this field is left blank or improperly coded, a default of NOFLAGW is assumed.

4.3.5.4 Error Messages

PMSEFIN 001 ABORT - INVALID EMISSION FACTOR FILE DATE SPECIFIED

Meaning: A nonnumeric value was specified on the option card for the emission factor file date criterion; therefore, the run was terminated.

Action: Correct the option card and resubmit the job.

PMSEFIN 002 ABORT - INVALID TRANSACTION DATE SPECIFIED

Meaning: A nonnumeric value was specified on the option card for the transaction date criterion; therefore, the run was terminated.

Action: Correct the option card and resubmit the job.

PMSEFIN 003 ERROR - NO VALID INSERTIONS SPECIFIED - INSERT EMISSION FACTOR ASSUMED

Meaning: No valid fields for insertion were specified on the option card; therefore, the default field (emission factor) was assumed.

Action: If other fields are required, resubmit the job with a valid option card.

PMSEFIN 004 ABORT - EMISSION FACTOR FILE CONTAINS ONLY A HEADER RECORD

Meaning: The emission factor file specified for this run contains no records except the header record; therefore, the run was terminated.

Action: Specify a valid emission factor file and resubmit the job.

PMSEFIN 005 WARNING - NO MATCHING EMISSION FACTOR FILE RECORD

Meaning: The emission factor file contains no record to match the specified internal transaction.

Action: None required.

PMSEFIN 006 WARNING - NO INSERTION DUE TO EMISSION FACTOR FILE DATE

Meaning: A matching emission factor file record was found, but no insertions were made since the record did not meet the user-specified date criterion.

Action: If an insertion is required for this transaction, specify a different date on the option card and resubmit the transaction.

PMSEFIN 007 WARNING - NO INSERTION DUE TO TRANSACTION DATE

Meaning: No insertions were made since the internal transaction did not meet the user-specified date criterion.

Action: If an insertion is required for this transaction, specify a different date on the option card and resubmit the transaction.

PMSEFIN 008 CONDITIONAL - NO 23 TRANSACTIONS GENERATED

Meaning: The emission factor file contains no records to match the specified SCC number, origin, and source combination.

Action: None required.

PMSEFIN 009 ERROR - INVALID FLAGW OPTION SPECIFIED - NOFLAGW ASSUMED

Meaning: The warning message suppression option was incorrectly specified; therefore, the default option, NOFLAGW, was assumed.

Action: If a listing of all warning messages is required, correct the option card and resubmit the job.

PMSEFIN 010 ABORT - INVALID EMISSION FACTOR FILE SPECIFIED

Meaning: The specified emission factor file has an invalid header record; therefore, the run was terminated.

Action: Specify a valid emission factor file and resubmit the job.

PMSEFIN 011 ERROR - NO OPTION CARD - INSERT EMISSION FACTOR ASSUMED

Meaning: No option card was specified; therefore, the default options of insert emission factor, no overrides, no date criteria, no date replacement, and warning message suppression were assumed.

Action: If other options are required, resubmit the job with a valid option card.

PMSEFIN 012 ERROR - NO VALID OVERRIDES SPECIFIED - NO OVERRIDES ASSUMED

Meaning: No valid overrides were specified on the option card; therefore, the default of no overrides was assumed.

Action: If overrides are required, correct the option card and resubmit the job.

4.3.7.5 Cataloged JCL - EPMST10

4.3.7.5.1 JCL listing -PMSEFIN (EP0100) is executed by the cataloged procedure EPMST10. This procedure also executes the master file internal transaction pre-insertion sort program, PSREFIN (EP0090). See Figure 4.3.7-d for a listing of EPMST10.

4.3.7.5.2 Cross-reference of DD names and files

Program Name: PSREFIN (EP0090)

DD Name	File Description	Input/Output
EPSINPT	Unsorted internal transactions	Input
SORTWK01	Sort work file	Internal
EPSOUTP	Sorted internal transactions	Output
EPSDIAG	Diagnostic report	Output

Program Name: PMSEFIN (EP0100)

DD Name	File Description	Input/Output
EPSOPTN	Option card	Input
EPSINPT	Sorted internal transactions	Input
EPSEMFC	EIS/PS emission factor file	Input
EPSOUTP	Internal transactions with insertions	Output
EPSDIAG	Diagnostic report	Output

4.3.7.5.3 User-supplied JCL - To execute the cataloged procedure EPMST10, the user must specify the data set names of the EIS/PS emission factor file and the input and output internal transaction files. An option card should be included to select the insertion fields and to specify the conditions for insertion. See Figure 4.3.7-e for a description of the procedure's substitutable parameters.

4.3.7.5.4 Sample run stream - The following run stream would insert information from the EIS/PS emission factor file 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EMFFIL' into all of the valid insertion fields for the internal transactions contained in the file 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.TRANSF3'. The file containing the output transactions would be named 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.INSTRAN'. Note that the FLAGW option, date criteria, and overrides are specified.

```
// EXEC EPMST10,
//      EMFCFIL=EMFFIL,
//      OLDINTR=TRANSF3,
//      NEWINTR=INSTRAN
//INSERT.OPTIONS DD *
FLAGW   SUL IO ASH IO EMISSION IO EDAT 79179 TDAT 79200
/*
```

4.3.7.6 Warnings and Special Instructions

The input internal transactions must be sorted by the master file internal transaction pre-insertion sort program, PSREFIN (EP0090), prior to being input to PMSEFIN (EP0100); and the output internal transactions must be sorted by the master file internal transaction sort program, PSRINTR (EP0110), prior to being input to the master file maintenance program, PFMMSTR (EP0120).

If an override option is specified for an insertion field, any data coded in that field will be replaced by the data in the matching emission factor file record.

If an internal transaction with a source of 'H' is submitted, no insertions will be made into that transaction. If a type 23 internal transaction with a pollutant ID of zero is submitted, type 23 internal transactions will be generated for each pollutant ID in the emission factor file for that SCC, origin, and source combination.

4.3.7.7 Cost Considerations

The estimates listed below are for the execution of PMSEFIN (EP0100) on an IBM 370/168:

Number of internal transactions:	576 transactions
Number of emission factor file records:	475 records
Number of transactions receiving insertions:	25 transactions
Number of type 23 transactions generated:	184 transactions
CPU time:	.53 seconds
I/O time:	2.10 seconds
Total time:	2.63 seconds
Estimated cost:	$.37

4.3.7.8 Related Programs and Procedures

The master file internal transaction pre-insertion sort program, PSREFIN (EP0090), must be executed prior to PMSEFIN (EP0100). The cataloged procedure EPMST10 executes both of these programs.

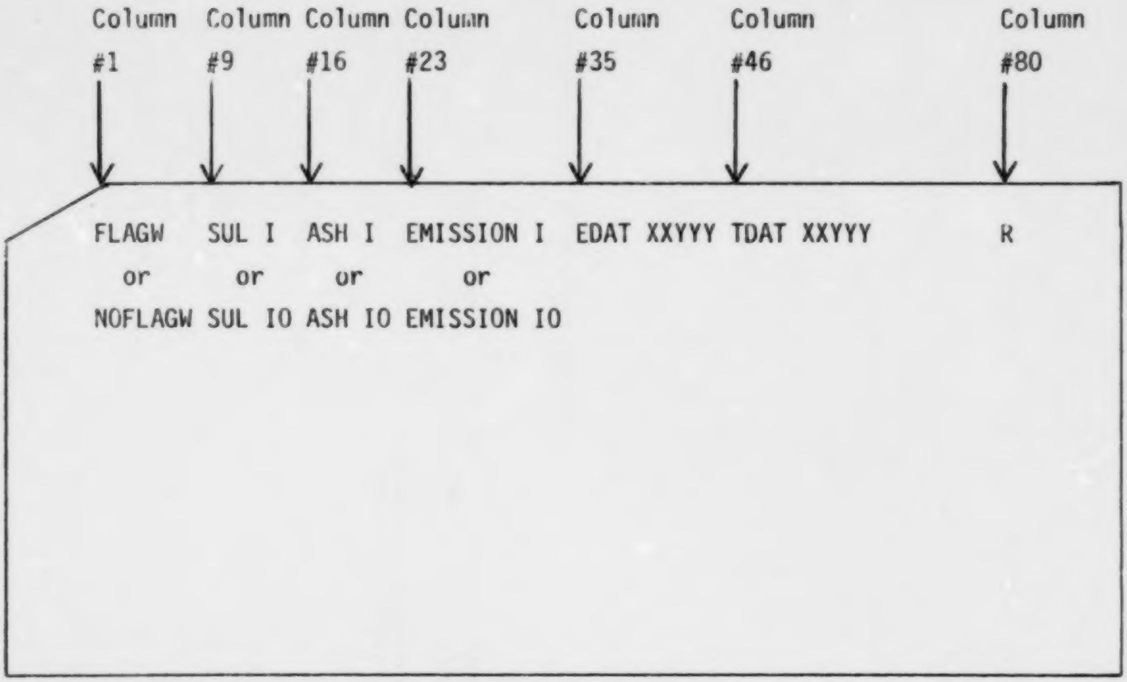
EIS/PS master file internal transactions can be created, sorted, have the insertions made, and be used to update (or create) the master file by executing the cataloged procedure EPEMM10 or the cataloged procedure EPFMM20. See Section 4.4.3 for information on EPEMM10 and Section 4.4.4 for information on EPFMM20.

Type of Transaction	Valid Insertion Fields
21	Sulfur Content Ash Content
23	Emission Factor

Figure 4.3.7-a. Valid Insertion Fields

```
                    MASTER FILE INTERNAL TRANSACTION EMISSION FACTOR INSERTION PROGRAM                        PAGE   1


PROGRAM NAME: PMSEFIN (EP0100)
REVISION LEVEL:  1-00
LAST UPDATE #:   P-1
DATE INCORPORATED:  FEBRUARY 1, 1980


OPTIONS IN EFFECT:  FLAGW

          FIELDS SELECTED FOR INSERTIONS:  SUL  ASH  EMISSION

          FIELDS TO BE OVERRIDDEN:  SUL  ASH  EMISSION


 SULFUR I  O  ASH I  O  EMISSION FACTOR I  O                        DATE: EMISSION FACTOR   N    TRANSACTION   N

0600802400800000300042102000810000000211080080240800037400004102000810 0     0085090      000025000008F             21A
         *** PMSEFIN 005 WARNING - NO MATCHING EMISSION FACTOR FILE RECORD

0600802400800000300042102000810000000231080080240800037400004102000810 0F 00000                                   23A
         *** PMSEFIN 005 WARNING - NO MATCHING EMISSION FACTOR FILE RECORD


NUMBER OF INPUT TRANSACTIONS:                 576
NUMBER OF EMISSION FACTOR RECORDS READ:       475
NUMBER OF INSERTIONS MADE:                     25
NUMBER OF OUTPUT TRANSACTIONS:                720
NUMBER OF 23 TRANSACTIONS CREATED:            184
NUMBER OF WARNING MESSAGES:                    14
NUMBER OF CONDITIONAL MESSAGES:                 0
NUMBER OF ERROR MESSAGES:                       0
NUMBER OF ABORT MESSAGES:                       0
NUMBER OF DISASTER MESSAGES:                    0
```

Figure 4.3.9-c. Diagnostic Report



Note: 1. XX denotes the year; YYY the Julian date

2. Each field must contain one of the possible values indicated for it or be blank.

Figure 4.3.7-c. Option Card Format

```
//* EPALMO/A0R7 MENG.EPEIN, LLOYD M. (919) 541-5491                     00000100
//*                                                                      00000200
//*    PROCEDURE NAME: EPMST10                                           00000300
//*    REVISION LEVEL: 1-00                                              00000400
//*    LAST UPDATE #: P-1                                                00000500
//*    DATE INCORPORATED:  FEBRUARY 1, 1980                              00000600
//*                                                                      00000700
//*    THIS PROCEDURE ALLOWS THE USER TO INSERT THE EMISSION FACTOR      00000800
//*    INTO THE EIS/PS MASTER FILE INTERNAL TRANSACTION                  00000900
//*                                                                      00001000
//*                                                                      00001100
//EPMST10 PROC  PROJECT='CN.EPALMO.A0R7.EPAS.MU.PNI',                    00001200
//              PROG1=PSREFIN,                                           00001300
//              PROG2=PMSEFIN,                                           00001400
//              REGION1=150K,                                            00001500
//              REGION2=100K,                                            00001600
//              TIME1='1,0',                                             00001700
//              TIME2='1,0',                                             00001800
//              OUTPTR=EPOUTPT,                                          00001900
//              NEWDATR=EPOFNIUT,                                        00002000
//              EMFFIL=EPEMFFIL,                                         00002100
//              UNIT=3330,                                               00002200
//              SERIAL=CONSPR,                                           00002300
//              DISP1='OLD,PASS',                                        00002400
//              DISP2='NEW,CATLG,DELETE',                                00002500
//              SPCUNIT=TRK,                                             00002600
//              PRIMARY=20,                                              00002700
//              SECONDRY=10,                                             00002800
//              TEMP=SYSDA,                                              00002900
//              WORKSPC='20,10',                                         00003000
//              OUT=A                                                    00003100
//*                                                                      00003200
//SORT    EXEC  PGM=&PROG1,                                              00003300
//              REGION=&REGION1,                                         00003400
//              TIME=(&TIME1)                                            00003500
//*                                                                      00003600
//* SORT EIS/PS MASTER FILE INTERNAL TRANSACTIONS DATA FILE SEQUENCE     00003700
//*                                                                      00003800
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                                   00003900
//              VOLUME=(PRIVATE,RETAIN),                                 00004000
//              DISP=(SHR,PASS)                                          00004100
//SORTLIB    DD DSNAME=SYS1.SORTLIB,                                     00004200
//              DISP=(SHR,PASS)                                          00004300
//*                                                                      00004400
//SORTWK01   DD UNIT=&TEMP,                                              00004500
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                           00004600
//*                                                                      00004700
//SORTWK02   DD UNIT=(&TEMP,SEP=SORTWK01),                               00004800
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                           00004900
//*                                                                      00005000
//SORTWK03   DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                    00005100
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                           00005200
//*                                                                      00005300
//* INPUT DATA SET - MASTER FILE INTERNAL TRANSACTIONS                   00005400
//*                                                                      00005500
//EESINPT    DD DSNAME=&PROJECT..DATA,&UPDATE,                           00005600
```

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Figure 4.3.7-d. Cataloged Procedure EPMST10

```
//              DISP=(&DISP1)                                          00005700
//*                                                                    00005800
//* OUTPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS         00005900
//*                                                                    00006000
//EPSOUTP   DD DSNAME=&&SORTED,                                        00006100
//              UNIT=&TEMP,                                            00006200
//              DISP=(NEW,PASS,DELETE),                                00006300
//              SPACE=(TRK,(&SORTSPC),RLSE)                            00006400
//*                                                                    00006500
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                00006600
//*                                                                    00006700
//EPSDIAG   DD SYSOUT=&OUT                                             00006800
//*                                                                    00006900
//* OUTPUT DATA SETS - SYSTEM OPERATION                                00007000
//*                                                                    00007100
//SYSPRINT  DD SYSOUT=&OUT                                             00007200
//*                                                                    00007300
//SYSOUT    DD SYSOUT=&OUT                                             00007400
//*                                                                    00007500
//SYSDBOUT  DD SYSOUT=&OUT                                             00007600
//*                                                                    00007700
//SYSUTERM  DD SYSOUT=&OUT                                             00007800
//*                                                                    00007900
//SYSUDUMP  DD SYSOUT=&OUT                                             00008000
//*                                                                    00008100
//*                                                                    00008200
//INSERT  EXEC PGM=&PROG2,                                             00008300
//              REGION=&REGION2,                                       00008400
//              TIME=(&TIME2)                                          00008500
//*                                                                    00008600
//* INSERT EMISSION FACTORS                                            00008700
//*                                                                    00008800
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                  00008900
//              VOLUME=(PRIVATE,RETAIN),                               00009000
//              DISP=(SHR,PASS)                                        00009100
//*                                                                    00009200
//* INPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS          00009300
//*                                                                    00009400
//EPSINPT   DD DSNAME=&&SORTED,                                        00009500
//              DISP=(SHR,PASS)                                        00009600
//*                                                                    00009700
//* INPUT DATA SET - OPTION CARD                                       00009800
//*                                                                    00009900
//EPSOPIN   DD DDNAME=OPTIONS,                                         00010000
//              DCB=BLKSIZE=80                                         00010100
//*                                                                    00010200
//* INPUT DATA SET - EIS/PS EMISSION FACTOR FILE                       00010300
//*                                                                    00010400
//EPS[illegible] DD DSNAME=&PROJECT..DATA.&[illegible],                00010500
//              VOLUME=(PRIVATE,RETAIN),                               00010600
//              DISP=(SHR,PASS)                                        00010700
//*                                                                    00010800
//* OUTPUT DATA SET - INTERNAL TRANSACTIONS WITH EMISSION FACTORS      00010900
//*                                                                    00011000
//EPSOUTP   DD DSNAME=&PROJECT..DATA.&[illegible],                     00011100
//              VOLUME=(PRIVATE,RETAIN,SER=&[illegible]),              00011200
```

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Figure 4.3.7-d - continued. Cataloged Procedure EPMST10

```
//             DISP=(&DISP2),                                           00011300
//             UNIT=&UNIT,                                              00011400
//             SPACE=(&SPCUNIT,(&PRIMARY,&SECNDRY),RLSE)                00011500
//*                                                                     00011600
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00011700
//*                                                                     00011800
//EPSDIAG   DD SYSOUT=&OUT                                              00011900
//*                                                                     00012000
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00012100
//*                                                                     00012200
//SYSPRINT  DD SYSOUT=&OUT                                              00012300
//*                                                                     00012400
//SYSOUT    DD SYSOUT=&OUT                                              00012500
//*                                                                     00012600
//SYSDBOUT  DD SYSOUT=&OUT                                              00012700
//*                                                                     00012800
//SYSDTERM  DD SYSOUT=&OUT                                              00012900
//*                                                                     00013000
//SYSUDUMP  DD SYSOUT=&OUT                                              00013100
//*                                                                     00013200
//*                                                                     00013300
```

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Figure 4.3.7-d - continued. Cataloged Procedure EPMST10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPEMFFIL would be the full data set name of the emission factor file)
PROG1	PSREFIN	Master file internal transaction pre-insertion sort program
PROG2	PMSEFIN	Master file internal transaction emission factor insertion program
REGION1	150K	Region size allocated for execution of PSREFIN
REGION2	100K	Region size allocated for execution of PMSEFIN
TIME1	'1,0'	Time allocated for execution of PSREFIN
TIME2	'1,0'	Time allocated for execution of PMSEFIN
OLDINTR	EPOLDINT	Lowest-level index of input internal transaction file
NEWINTR	EPNEWINT	Lowest-level index of output internal transaction file
EMFCFIL	EPEMFFIL	Lowest-level index of emission factor file
UNIT	3330	Unit type to which output internal transaction file is to be written

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Figure 4.3.7-e. Substitutable Parameters for EPMST10

Parameter Name	Default Value	Description
SERIAL	CDHSPK	Serial number of volume to which output internal transaction file is to be written
DISP1	OLD,PASS	Disposition of input internal transactions
DISP2	'NEW,CATLG, DELETE'	Disposition of output internal transaction file
SPCUNIT	TRK	Units in which space for output internal transactions is to be allocated
PRIMARY	20	Primary space allocation for output internal transactions
SECNDRY	10	Secondary space allocation for output internal transactions
TEMP	SYSDA	Unit type for temporary work space
WORKSPC	'20,10'	Space allocation for sort work areas
OUT	A	SYSOUT class for all print files

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Figure 4.3.7-e - continued. Substitutable Parameters for EPMST10

4.3.8. MASTER FILE INTERNAL TRANSACTION SORT PROGRAM - PSRINTR (EP0110)

4.3.8.1 Description

PSRINTR (EP0110) sorts master file internal transactions into the sequence required by the master file maintenance program PFMMSTR (EP0120); Figure 4.3.8-a details this sort order. All master file internal transactions must be sorted by PSRINTR (EP0110) before they can be used to update (or create) the master file. See Section 4.3.5 for additional information on the internal transactions.

4.3.8.2 File Formats

Input to this program consists solely of master file internal transactions generated by PCENETR (EP0060), the NEDS to EIS/PS master file transaction conversion-edit program; PEDMSTR (EP0080), the master file transaction edit program; PMSEFIN (EP0100), the master file internal transaction emission factor insertion program; or PMSEFGN (EP0130), the master file emission factor transaction generator program. Refer to Figure 4.3.5-c for the internal transaction format.

PSRINTR (EP0110) produces two output files: a diagnostic report and a temporary file containing the sorted internal transactions. The sorted transactions are in the same sequence as the master file and can be used as input to the master file maintenance program, PFMMSTR (EP0120). An example of the diagnostic report is shown in Figure 4.3.8-b.

4.3.8.3 Options and Control Cards

There are no options.

4.3.8.4 Error Messages

There are no error messages.

4.3.8.5 Cataloged JCL

PSRINTR (EP0110) should always be executed in conjunction with the master file maintenance program, PFMMSTR (EP0120). See Section 4.3.9.5 for a discussion of the cataloged procedure EPFMM10, which executes both programs.

4.3.8.6 Warnings and Special Instructions

Note that the COBOL sort verb is used in this program; therefore, the collating sequence for alphanumeric fields is determined by the computer at the user's particular installation.

In addition to the diagnostic report produced by PSRINTR (EP0110), messages generated by the sort-merge package will be printed. The format and content, as well as the physical location, of these messages depend upon the user's particular installation.

4.3.8.7 Cost Considerations

The following estimates are for the execution of PSRINTR (EP0110) on an IBM 370/168:

Number of internal transactions:	720 records
CPU time:	1.70 seconds
I/O time:	5.01 seconds
Total time:	6.71 seconds
Estimated cost:	$.94

4.3.8.8 Related Programs and Procedures

PSRINTR (EP0110) should always be executed in conjunction with the master file maintenance program, PFMMSTR (EP0120). The cataloged procedure EPFMM10 executes both programs.

There are three other cataloged procedures which execute PSRINTR (EP0110) and PFMMSTR (EP0120). The cataloged procedure EPEMM10 can be used to maintain the master file with EIS/PS master file transactions as input. See Section 4.4.3 for a discussion of this procedure. To maintain the master file using NEDS master file transactions, the cataloged procedure EPFMM20 can be executed (refer to Section 4.4.4.). And, to maintain the master file using emission factor transactions, the cataloged procedure EPFMM30 can be used. Refer to Section 4.4.5 for a discussion of EPFMM30.

Record Position	Description	Sort Sequence
1 - 2	State	Ascending
3 - 6	County	Ascending
7 - 9	AQCR	Ascending
10 - 17	Plant ID	Ascending
18 - 21	Point ID	Ascending
22	Segment Type	Ascending
23 - 30	SCC	Ascending
31 - 32	SCC Segment Number	Ascending
33 - 34	PNR Sequence Number	Ascending
35 - 37	PNR Line Number	Ascending
38 - 39	Card Number	Ascending
40	Action Type	Ascending

Figure 4.3.8-a. Sort Sequence for Master File Internal Transactions

```
                   EIS/PS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM                     PAGE 1

PROGRAM NAME: PSRINTR (EP0110)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS:     720
NUMBER OF OUTPUT TRANSACTIONS:    720
```

Figure 4.3.8-b. Diagnostic Report

4.3.9 MASTER FILE MAINTENANCE PROGRAM - PFMMSTR (EP0120)

4.3.9.1 Description

The master file maintenance program, PFMMSTR (EP0120), is used to create and/or update the EIS/PS master file. Internal format transactions produced either by the master file transaction edit program, PEDMSTR (EC0080), or the NEDS to EIS/PS master file transaction conversion-edit program, PCENETR (EP0060), are used as input to the file maintenance program. These internal transactions must be sorted into master file sequence by the master file internal transaction sort program, PSRINTR (EP0110), before they are input to the file maintenance program. In addition, emission factor information can be inserted into the internal transactions by the master file internal transaction emission factor insertion program, PMSEFIN (EP0100), prior to running the file maintenance.

Each internal transaction either creates, changes, or flags as delete a record in the master file. Any combination of transactions can be entered in one execution of the file maintenance program.

The EIS/PS master file contains four types of records: plant, point, SCC, and comment. Figure 4.3.9-a shows the formats of these records. The plant record contains general descriptive information pertaining to an individual plant (point source). Plants are defined by a plant ID within the county. These ID's are assigned sequentially beginning with 0001.

Each plant can contain up to 1,296 emission points. Each emission point is defined by a point record. Refer to AEROS Manual Series, Volume II: AEROS User's Manual, Section 3.1.2 for a discussion of the grouping of emission points. NEDS point ID's are used to identify the points. The point record contains descriptive information on the point and its emissions, as well as detailed emission information for a maximum of 16 pollutants.

Each point record can have up to ten SCC records associated with it. More than one SCC record can be defined for an SCC by using the SCC sequence number. The SCC record contains descriptive information related to the SCC as well as detailed emission factor information for a maximum of 16 pollutants.

Comment records are related to emission points. Up to 99 comments with up to 999 lines (records) each can be used for a single point. The comment records are 'free form' and can contain permits and registration information as well as other comments desired for the point. No information from the comment records is transmitted to NEDS. A chart of the general structure of the EIS/PS file can be seen in Figure 4.3.9-b.

All EIS/PS master file records contain a common key area at the beginning of the record. The plant ID field in this key is an eight-character number. This number is used instead of the four-character alphanumeric field coded by the user to insure that the file will be in the proper sequence on all computers. That is, to insure that plant 0001 will be the first possible and plant ZZZZ, the last possible plant for a county. Similarly, a four-digit number is used for point ID. These eight and four digit numbers are generated by converting the respective plant and point ID's to a totally numeric code.

All records contain flags to indicate their status for NEDS and EIS/PS The flags are used by the annual report program, PRPENTR (EP0200). One flag exists in each record for each type of NEDS and EIS/PS transaction used to create that record. A code of A for a flag indicates that the record has been added since the last execution of PRPENTR (EP0200); a code of C, that some change has been made to the record for a field on that transaction, a code of D or E, that the record (or pollutant) has been deleted. Note that deleted records remain physically in the master file until PRPENTR (EP0200) is run and that PRPENTR (EP0200) physically deletes all records flagged as deleted.

The requirements for adding records to the master file are as follows:

Plant - Valid 01, 02, and 03 transactions are required to add a plant record.

Point - A plant record must be present in the master file before any points will be accepted for that plant. Valid 11 and 12 transactions and at least one valid 13 transaction are required to add a point record.

SCC - A point record must be present in the master file before any SCC's will be accepted for that point. Valid 21 and 22 transactions and at least one valid 23 transaction are required to add an SCC record.

Comment - A point record must be present in the master file before any comments will be accepted for that point. A valid 30 transaction is required to add a comment. Any numeric line number can be used.

Emissions calculations are also performed by PFMMSTR (EP0120). The calculation involves a point record and all SCC records associated with it and is performed for each pollutant on the point record. The calculated emissions estimate is a sum of the estimates for all SCC's with a matching pollutant ID.

The control device efficiency from the point record is edited; if it is nonnumeric, a value of zero is used for the emissions calculation. The fuel process rate and emission factors in each SCC record are edited; if either is found to be nonnumeric, the calculation is bypassed for that SCC. The ash or sulfur content is edited when the ash/sulfur flag indicates that it will be used; if it is found to be nonnumeric, the calculation will be bypassed.

For each SCC/pollutant ID combination which passes the edit, the following calculation is performed:

$$\text{Estimated Emissons} = (F)(EF)(A/S)(1-CDEF)/2000$$

where

F = Fuel process rate
EF = Emission factor
A/S = Ash content or sulfur content (only if present)
CDEF = Control device efficiency

A calculation of the potential emissions is made using the formula:

$$\text{Potential} = (F)(EF)(A/S)/2000,$$

where the variables are the same as defined for the estimated emissions.

4.3.9.2 File Formats

PFMMSTR (EP0120) uses three input files: the current EIS/PS master file, the file of sorted internal transactions, and an option card. If PFMMSTR (EP0120) is being executed to create a EIS/PS master file rather than update a current one, there is no input master file. See Figure 4.3.5-c for the format of the internal transactions and Figure 4.3.9-a for the format of the master file. The option card is discussed in Section 4.3.9.3.

PFMMSTR (EP0120) produces a new (or updated) master file and a diagnostic report. The format of the master file is illustrated in Figure

4.3.9-a. The individual fields are the same as those described for the master file transactions in Figure 4.3.5-b with the addition of the sort key and the following fields:

potential emissions - a calculation performed by PFMMSTR (EP0120)
apportioned emissions - a calculation performed by PFMMSTR (EP0120)
record type - indicates the type of record (plant, point, SCC, or comment)
record size - the length of the record
NEDS and EIS flags - indicate NEDS and EIS activity
number of point pollutants - the number of pollutants in the point record
number of SCC pollutants - the number of pollutants in the SCC record

The diagnostic report contains the program update messages, option messages, diagnostic messages, and summary statistics. When a transaction is found to be invalid, it is printed in the diagnostic report along with a message indicating the error. Warning messages are not printed unless the user so specifies on the option card (see Section 4.3.9.3). See Figure 4.3.9-c for an example of the diagnostic report.

PFMMSTR (EP0120) also produces optional listings of the input and output master files and the internal transactions. See Figures 4.3.9-d, e, and f respectively for samples of these listings; information on obtaining these listings can be found in the following section.

4.3.9.3 Options and Control Cards

An option card should be entered into PFMMSTR (EP0120). There are three fields on the option card: a date, a FLAGW option, and a LIST option field. The format of the option card is shown in Figure 4.3.9-g.

A two-digit year is entered into the date field and is used for editing purposes.

The FLAGW option is used to indicate that warning messages should be printed in the diagnostic report. Warning messages are used to indicate that data was accepted but that the data may be questionable. A value of FLAGW in the field will allow the warning messages to be printed. If the field is blank or invalid, no warning messages will be printed.

The LIST option is used to indicate that listings of the input and output master files and of the internal transactions should be produced. Examples of these listings are shown in Figures 4.3.9-d, e, and f. A value of LIST in the field will produce all listings. If the field is blank or invalid, the listings are not produced.

4.3.9.4 Error Messages

PFMMSTR 001 CONDITIONAL - NO OPTION CARD

Meaning: The option card is required.

Action: Include an option card and resubmit the job.

PFMMSTR 002 WARNING - INVALID DATE ON OPTION CARD

Meaning: The date (year) must be numeric.

Action: No action is required.

PFMMSTR 003 CONDITIONAL - INVALID FLAGW FIELD ON OPTION CARD

Meaning: The valid codes are FLAGW and blank. A default of no FLAGW was assumed.

Action: No action need be taken unless the warning messages are required; in that case, correct the option card and resubmit the job.

PFMMSTR 004 ERROR - FIELDS MISSING FOR EMISSIONS CALCULATIONS, 0 USED FOR ESTIMATE

Meaning: One or more needed fields were missing for an SCC, zero was used for the emission estimate for that SCC.

Action: Information for the point should be checked, and any needed information added to the master file.

PFMMSTR 005 ERROR - NO MATCH ON MASTER FILE FOR TRANSACTION, CARD REJECTED

Meaning: A change or delete transaction was entered, but there was no matching record in the master file.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 006 ERROR - ADD TRANSACTION, RECORD ALREADY ON MASTER FILE, CARD REJECTED

Meaning: An add transaction was entered for a record that already exists in the master file (and is not flagged as deleted).

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 007 ERROR - TRANSACTION NOT ADD, BUT NO MASTER ON FILE, CARD REJECTED

Meaning: A transaction other than an add transaction was entered for a record that is not in the master file.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 008 CONDITIONAL - INVALID LIST FIELD ON OPTION CARD

Meaning: The valid codes are LIST and blank. A default of no LIST was assumed.

Action: If the listings are required, correct the option card and resubmit the job.

PFMMSTR 009 ABORT - TRANSACTION FILE OUT OF SEQUENCE

Meaning: The internal transactions must be sorted prior to being entered into PFMMSTR (EP0120).

Action: Sort the transactions using PSRINTR (EP0110) and resubmit the job using the sorted transactions. The procedure EPFMM10 executes both PSRINTR (EP0110) and PFMMSTR (EP0120).

PFMMSTR 010 ERROR - INVALID ACTION CODE ON TRANSACTION, CARD REJECTED

Meaning: Valid action codes are A (add), C (change), and D (delete).

Action: Correct and resubmit the transaction.

PFMMSTR 011 ERROR - INVALID CARD NUMBER ON TRANSACTION, CARD REJECTED

Meaning: Valid card numbers are 01-04 for plants, 11-14 for points, 21-25 for SCC's, and 30 for comments.

Action: Correct and resubmit the transaction.

PFMMSTR 012 ERROR - POINT POLLUTANT ID ALREADY ON FILE, CARD REJECTED

Meaning: An add transaction was entered for a pollutant that already exists for the point.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 013 ERROR - ATTEMPT TO ADD MORE THAN MAXIMUM NUMBER OF POINT POLLUTANTS

Meaning: A maximum of 16 pollutants can be specified for a point record.

Action: If more than 16 pollutants are necessary, see Appendix B for instructions on program table modifications.

PFMMSTR 014 ERROR - NO MATCHING POINT POLLUTANT ID FOR TRANSACTION, CARD REJECTED

Meaning: A change transaction was input for a pollutant that does not exist for the point.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 015 ERROR - SCC POLLUTANT ID ALREADY ON FILE, POLLUTANT REJECTED

Meaning: An add transaction was entered for a pollutant that already exists for the SCC.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 016 ERROR - ATTEMPT TO ADD MORE THAN MAX NUMBER OF SCC POLLUTANTS

Meaning: A maximum of 16 pollutants can be specified for an SCC.

Action: If more than 16 pollutants are necessary, see Appendix B for instructions on program table modifications.

PFMMSTR 017 ERROR - NO MATCHING SCC POLLUTANT ID FOR TRANSACTION, CARD REJECTED

Meaning: A change transaction was input for a pollutant that does not exist for the SCC.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 018 ABORT - INPUT MASTER FILE OUT OF SEQUENCE

Meaning: An out-of-sequence master file record was found, and therefore, the run was terminated. Do not use the output from this run.

Action: Determine if the input master file has been sorted by PSRGENR (EP0170). If it has, execute PFMMSTR (EP0120) again using the correct master file (i.e., a master file not sorted by PSRGENR (EP0170)). If the correct master file was entered, there is a serious problem with that master file, and the user should contact NADB.

PFMMSTR 019 ERROR - NEW MASTER RECORD INCOMPLETE, NOT WRITTEN

Meaning: Valid 01, 02, and 03 cards are needed to add a plant record. Valid 11 and 12 cards and at least one 13 card are needed to add a point. Valid 21 and 22 cards and at least one 23 card are needed to add an SCC.

Action: Insure that all required transactions are present and valid, then resubmit them.

PFMMSTR 020 ERROR - POINT INCOMPLETE, SCC NOT WRITTEN TO OUTPUT MASTER FILE

Meaning: Valid 11 and 12 cards and at least one 13 card are needed to add a point. At least one of these was not present. No SCC records will be written for the point, even though they may have all necessary cards.

Action: Insure that all required transactions are present and valid; then resubmit them.

PFMMSTR 021 ABORT - OUTPUT MASTER FILE OUT OF SEQUENCE

Meaning: An attempt was made to write a master file record out of sequence, and therefore, the run was terminated. Do not use the output from this run.

Action: Contact NADB.

PFMMSTR 022 ABORT - INVALID RECORD ON INPUT MASTER FILE

Meaning: A master file record was read that was not a point, plant, SCC, or comment record.

Action: Determine if a correct EIS/PS master file was entered. If not, execute PFMMSTR (EP0120) again using the correct input file. If a correct file was used, there is a serious problem with that master file, and the user should contact NADB.

PFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

Meaning: While performing the calculation routine, a value greater than 10^7 was found. Therefore, zero was moved to the emissions estimate.

Action: Determine if the fuel process rate, emission factor, and other fields used in the calculation are correct; if not, correct the invalid fields through normal file maintenance procedures.

PFMMSTR 024 ERROR - ATTEMPT TO ADD COMMENT TO NONEXISTENT POINT

Meaning: Comment records can only be added when the corresponding point record exists.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 025 ERROR - ATTEMPT TO ADD SCC TO NONEXISTENT POINT

Meaning: SCC records can only be added when the corresponding point record exists.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 026 ERROR - ATTEMPT TO ADD POINT TO NONEXISTENT PLANT

Meaning: Point records can only be added when the corresponding plant record exists.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 027 ERROR - INVALID CARD NUMBER FOR DELETE

Meaning: The valid card numbers for deletes are 01, 11, 13, 21, 23, and 30.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 028 ERROR - INVALID INITIAL ADD CARD NUMBER

Meaning: An 01, 11, 21, or 30 card is required to initialize the addition of a record.

Action: If the transaction is incomplete or coded incorrectly, correct and resubmit it.

PFMMSTR 029 ERROR - ATTEMPT TO ADD DUPLICATE SCC

Meaning: Up to fifteen SCC records (including SCC's marked for deletion) can be used for a single point. If additional records are needed for an SCC, different SCC sequence numbers should be assigned to each record.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 030 ERROR - ATTEMPT TO DELETE POINT POLL NOT ON FILE

Meaning: A delete card was entered for a pollutant that does not exist in the point record.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 031 ERROR - ATTEMPT TO DELETE SCC POLLUTANT NOT ON FILE

Meaning: A delete card was entered for a pollutant that does not exist in the SCC record.

Action: If the transaction was coded incorrectly, correct and resubmit it.

PFMMSTR 032 ERROR - MASTER FILE CONTAINS SCC WITH NO POINT

Meaning: An SCC was encountered with no matching point. It will not be written to the output file.

Action: Contact NADB.

PFMMSTR 033 ERROR - MORE THAN MAXIMUM NUMBER OF SCC FOR POINT

Meaning: A maximum of 15 SCC's are allowed for a single point (including SCC's flagged delete).

Action: If more than 15 SCC's are necessary, contact NADB for instructions on program table modifications.

PFMMSTR 034 ERROR - DUPLICATE TRANSACTION - CARD REJECTED

Meaning: Duplicate keys are allowed only on change transactions. The first card is accepted; the second rejected.

Action: If an incorrect transaction was accepted, correct the error and resubmit the job.

4.3.9.5 Cataloged JCL - EPFMM10

4.3.9.5.1 JCL listing - PFMMSTR (EP0120) is executed by the cataloged procedure EPFMM10. This procedure also executes the master file internal transaction sort program, PSRINTR (EP0110). See Figure 4.3.9-h for a listing of the procedure.

4.3.9.5.2 Cross-reference of DD names and files

Program Name: PSRINTR (EP0110)

DD Name	File Description	Input/Output
EPSINPT	Unsorted internal transactions	Input
EPSOUTP	Sorted internal transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PFMMSTR (EP0120)

DD Name	File Description	Input/Output
EPSINTR	Sorted internal transactions	Input
EPSOLMF	Old EIS/PS master file	Input
EPSOPTN	Option card	Input
EPSNWMF	New or updated EIS/PS master file	Output
EPSDIAG	Diagnostic report	Output
EPSINTL	Internal transaction listing	Cutput
EPSOLDL	Old master file listing	Output
EPSNEWL	New master file listing	Output

4.3.9.5.3 User-supplied JCL - To execute the cataloged procedure EPFMM10, the user must specify the data set names of the input (old) master file, the input internal transactions, and the output (new or updated) master file. See Figure 4.3.9-i for a description of the procedure's substitutable parameters.

4.3.9.5.4 Sample Run Stream - The following run stream would update the EIS/PS master file 'CN.EPALMH.A087.CDHS.HQ.PNT.EPMASTR1'. The updated file is named 'CN.EPALMH.A087.CDHS.HQ.PNT.EPMASTR2'. The option card specifies a year of 80, but no LIST or FLAGW options are specified. The default name is used for the input internal transaction file.

```
//   EXEC   EPFMM10,
//          OLDMSTR = EPMASTR1,
//          NEWMSTR = EPMASTR2
//UPDATE.OPTIONS DD *
80
/*
```

4.3.9.6 Warnings and Special Instructions

There are no warnings for this program.

4.3.9.7 Cost Considerations

To reduce the cost of running PFMMSTR (EP0120), use the default options of no LIST and no FLAGW unless you actually need the information.

The estimates listed below are for the execution of PFMMSTR (EP0120) on an IBM 370/168:

Number of old EIS/PS master file records:	123 records
Number of internal transactions:	243 records
Number of updated master file records:	172 records
CPU time:	.89 seconds
I/O time:	1.83 seconds
Total time:	2.72 seconds
Estimated Cost:	$.38

4.3.9.8 Related Programs and Procedures

The cataloged procedure EPEMM10 can be executed to update the master file using EIS/PS input transactions. NEDS transactions can be entered into the procedure EPFMM20 to be converted to EIS/PS internal transactions format and used to update the master file. The master file can also be updated using generated transactions containing emission factor information by executing the procedure EPFMM30. Information on these procedures is given in Section 4.4.

EIS/PS Master File - Plant Record

Column #	Field Length	Data Type	Description
1 - 37	37	Numeric	Sort Key
38 - 41	4	Numeric	Record Size
42 - 43	2		Unused
44 - 45	2	Numeric	State
46 - 49	4	Numeric	County
50 - 52	3	Numeric	AQCR
53 - 56	4	Alphanumeric	Plant ID
57 - 61	5	Numeric	Date
62	1	Numeric	Record Type
63 - 64	2		Unused
65 - 67	3	Alphanumeric	User Control Region
68 - 69	2	Alphanumeric	Local Control
70 - 81	12	Alphanumeric	User Plant ID
82 - 85	4	Numeric	City
86 - 87	2	Numeric	UTM Zone
88	1	Alphabetic	Ownership Code
89 - 103	15	Alphanumeric	Contact
104 - 113	10	Numeric	Telephone
114 - 123	10	Alphanumeric	Principal Product
124 - 171	48	Alphanumeric	Name and Address
172 - 175	4	Numeric	Number of Employees

(Page 1 of 8)

Figure 4.3.9-a. EIS/PS Master File Format

EIS/PS Master File - Plant Record (continued)

Column #	Field Length	Data Type	Description
176 - 181	6	Numeric	Property Area
182 - 229	48	Alphanumeric	Mailing Address
230	1	Alphabetic	NEDS P1 Card Flag
231 - 282	52	Alphanumeric	NEDS P7 Plant Comment
283	1	Alphabetic	NEDS P7 Plant Card Flag
284	1	Alphabetic	EIS 01 Card Flag
285	1	Alphabetic	EIS 02 Card Flag
286	1	Alphabetic	EIS 03 Card Flag
287	1	Alphabetic	EIS 04 Card Flag
288 - 292	5		Unused

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Figure 4.3.9-a - continued. EIS/PS Master File Format

EIS/PS Master File - Point Record

Column #	Field Length	Data Type	Description
1 - 37	37	Numeric	Sort Key
38 - 41	4	Numeric	Record Size
42 - 43	2		Unused
44 - 45	2	Numeric	State
46 - 49	4	Numeric	County
50 - 52	3	Numeric	AQCR
53 - 56	4	Alphanumeric	Plant ID
57 - 61	5	Numeric	Date
62	1	Numeric	Record Type
63 - 64	2	Alphanumeric	NEDS Point ID
65 - 67	3	Alphanumeric	User Point ID
68 - 71	4	Numeric	SIC Code
72 - 73	2	Numeric	IPP Code
74 - 77	4	Numeric	UTM Horizontal Coordinate
78 - 82	5	Numeric	UTM Vertical Coordinate
83 - 88	6	Numeric	Latitude
89 - 95	7	Numeric	Longitude
96 - 103	8	Numeric	Percentage Annual Thruput
104 - 108	5	Numeric	Normal Operating Rate
109 - 113	5	Numeric	Boiler Design Capacity
114 - 116	3	Numeric	Space Heat Percentage
117 - 120	4	Numeric	Stack Height
121 - 123	3	Numeric	Stack Diameter
124 - 127	4	Numeric	Stack Temperature

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Figure 4.3.9-a - continued. EIS/PS Master File Format

EIS/PS Master File - Point Record (continued)

Column #	Field Length	Data Type	Description
128 - 134	7	Numeric	Exhaust Flow Rate
135 - 139	5	Numeric	Velocity
140 - 143	4	Numeric	Plume Height
144 - 147	4	Numeric	Points with Common Stack
148	1	Numeric	Compliance Status
149 - 152	4	Numeric	Compliance Schedule
153 - 158	6	Numeric	Compliance Update
159	1	Numeric	ECAP
160 - 171	12	Numeric	Control Regulations
172	1	Alphabetic	NEDS P2 Card Flag
173	1	Alphabetic	NEDS P3 Card Flag
174	1	Alphabetic	NEDS P4 Card Flag
175	1	Alphabetic	NEDS P5 Card Flag
176	1	Alphabetic	PWCS NEDS Flag
177 - 228	52	Alphanumeric	NEDS P7 Point Comment
229	1	Alphabetic	NEDS P7 Point Card Flag
230	1	Alphabetic	EIS 11 Card Flag
231	1	Alphabetic	EIS 12 Card Flag
232	1	Alphabetic	EIS 14 Card Flag
233 - 238	6		Unused
239 - 240	2	Numeric	Number of Point Pollutants
241 - 245	5	Numeric	Point Pollutant ID
246 - 252	7	Numeric	Control Equipment Cost
253 - 255	3	Numeric	Primary Control Equipment

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Figure 4.3.9-a - continued. EIS/PS Master File Format

EIS/PS Master File - Point Record (continued)

Column #	Field Length	Data Type	Description
256 - 258	3	Numeric	Secondary Control Equipment
259 - 261	3	Numeric	Estimated Control Efficiency
262 - 268	7	Numeric	Estimated Emissions
269 - 275	7	Numeric	Measured Emissions
276 - 282	7	Numeric	Allowable Emissions
283 - 289	7	Numeric	Potential Emissions
290	1	Numeric	Emissions Units
291	1	Numeric	Estimation Method
292	1	Numeric	Test Method
293	1	Alphabetic	EIS 13 Card Flag
			Positions 241 - 293 can be repeated up to 15 times

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Figure 4.3.9-a - continued. EIS/PS Master File Format

EIS/PS Master File - SCC Record

Column #	Field Length	Data Type	Description
1 - 37	37	Numeric	Sort Key
38 - 41	4	Numeric	Record Size
42 - 43	2	Numeric	Unused
44 - 45	2	Numeric	State
46 - 49	4	Numeric	County
50 - 52	3	Numeric	AQCR
53 - 56	4	Alphanumeric	Plant ID
57 - 61	5	Numeric	Date
62	1	Numeric	Record Type
63 - 64	2	Alphanumeric	NEDS Point ID
65 - 72	8	Numeric	SCC
73 - 74	2	Numeric	SCC Sequence Number
75 - 79	5	Numeric	BEC Code
80	1	Numeric	Fuel Units
81 - 87	7	Numeric	Fuel Process Rate
88 - 94	7	Numeric	Maximum Design Rate
95 - 97	3	Numeric	Sulfur Content
98 - 100	3	Numeric	Ash Content
101 - 105	5	Numeric	Heat Content
106	1	Numeric	Confidentiality
107	1	Alphabetic	Source Code
108 - 132	25	Alphanumeric	Source Description
133	1	Alphabetic	EMF Origin
134	1	Alphabetic	NEDS P6 Card Flag

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Figure 4.3.9-a - continued. EIS/PS Master File Format

EIS/PS Master File - SCC Record (continued)

Column #	Field Length	Data Type	Description
135 - 186	52	Alphanumeric	NEDS P7 SCC Comment
187	1	Alphabetic	NEDS P7 SCC Card Flag
188	1	Alphabetic	EIS 21 Card Flag
189	1	Alphabetic	EIS 22 Card Flag
190	1	Alphabetic	EIS 24 Card Flag
191	1	Alphabetic	EIS 25 Card Flag
192 - 196	5	Alphabetic	Unused
197 - 198	2	Numeric	Number of SCC Pollutants
199 - 203	5	Numeric	SCC Pollutant ID
204 - 212	9	Numeric	Emission Factor
213	1	Alphabetic	EIS 23 Card Flag
214	1	Alphabetic	Ash-Sulfur Code
215	1	Numeric	EMF Units
216 - 222	7	Numeric	Apportioned Emissions Positions 199 - 222 can be repeated up to 15 times

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Figure 4.3.9-a - continued. EIS/PS Master File Format

EIS/PS Master File - Comment Record

Column #	Field Length	Data Type	Description
1 - 37	37	Numeric	Sort Key
38 - 41	4	Numeric	Record Size
42 - 43	2		Unused
44 - 45	2	Numeric	State
46 - 49	4	Numeric	County
50 - 52	3	Numeric	AQCR
53 - 56	4	Alphanumeric	Plant ID
57 - 61	5	Numeric	Date
62	1	Numeric	Record Type
63 - 64	2	Alphanumeric	NEDS Point ID
65 - 66	2	Numeric	PNR Sequence Number
67 - 69	3	Numeric	PNR Line Number
70	1	Alphabetic	EIS 30 Card Flag
71 - 172	102	Alphanumeric	Comment

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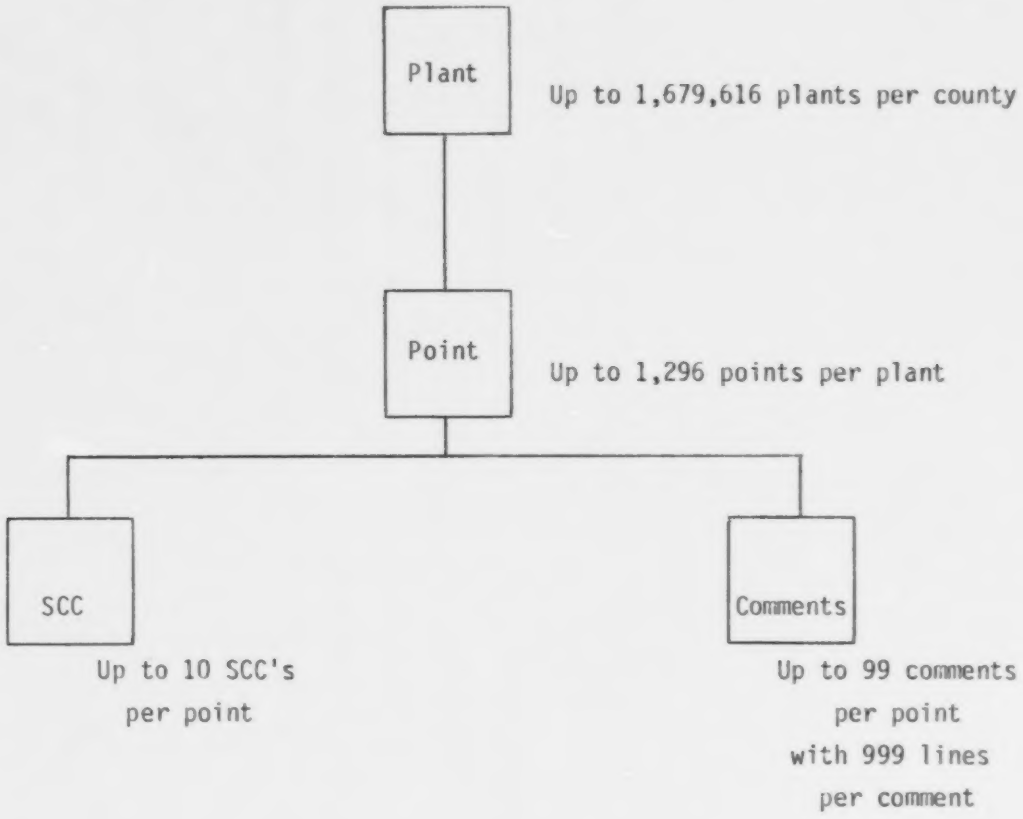
Figure 4.3.9-a - continued. EIS/PS Master File Format



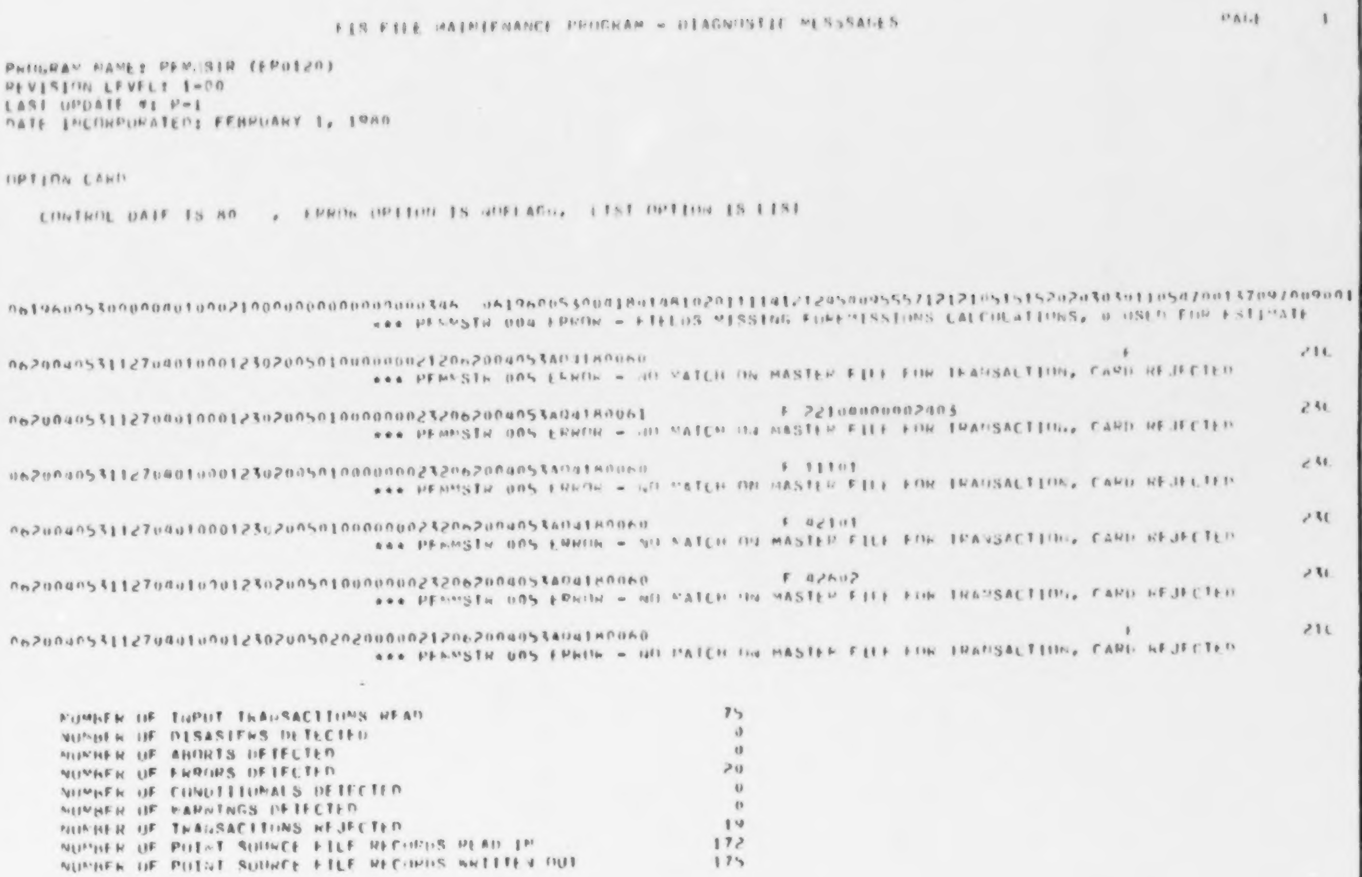
Up to 1,679,616 plants per county

Up to 1,296 points per plant

Up to 10 SCC's per point

Up to 99 comments per point with 999 lines per comment

Figure 4.3.9-b. Structure of EIS/PS Master File

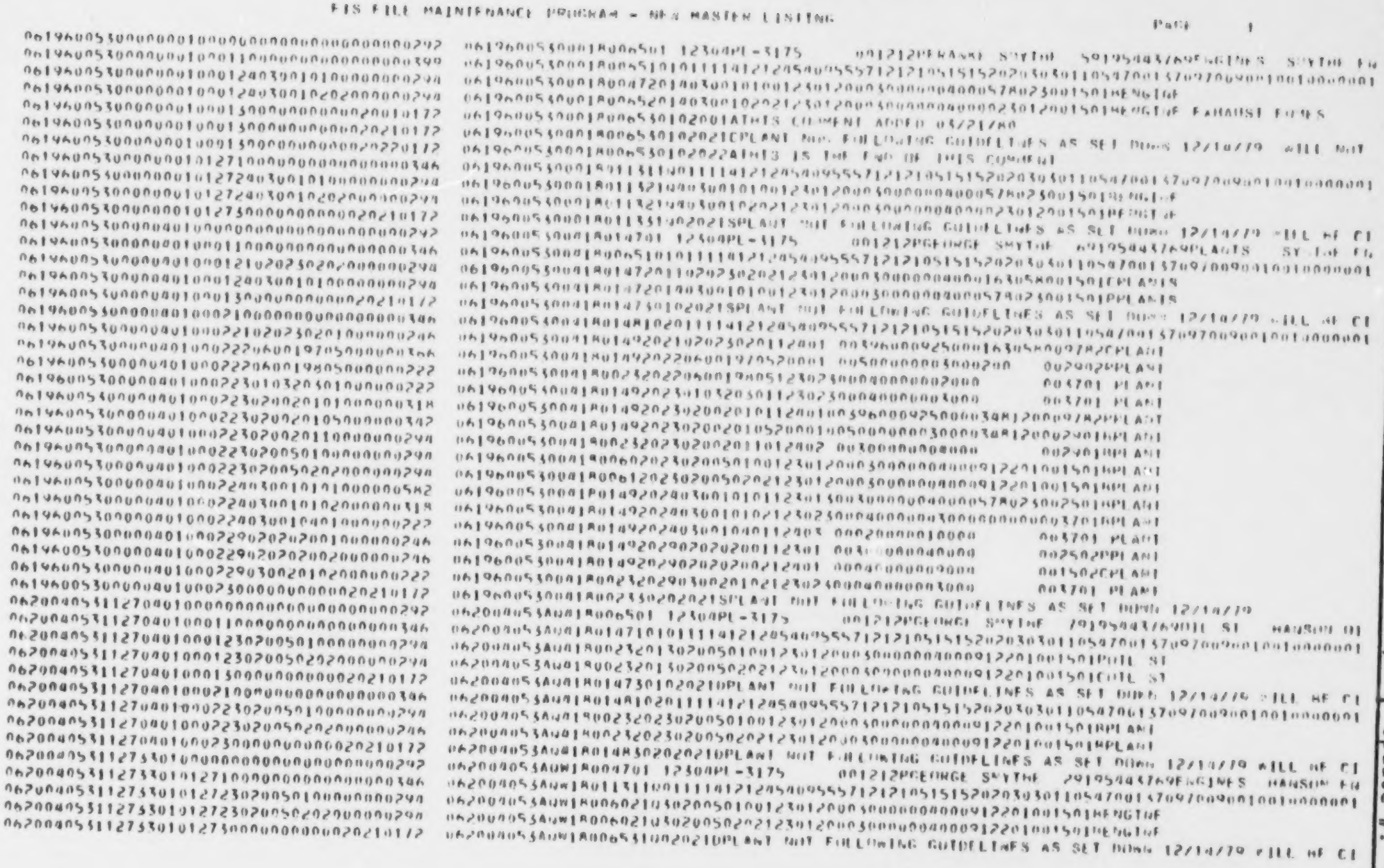


```
                    EIS FILE MAINTENANCE PROGRAM - DIAGNOSTIC MESSAGES                    PAGE    1

PROGRAM NAME: PFMMSTR (EP0120)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980


OPTION CARD

   CONTROL DATE IS 80   ,  ERROR OPTION IS NOFLAG,  LIST OPTION IS LIST



061960053000000001000210000000000000003000346   06196005300018014810201111412120500955571212105151520203030110547001370970009001
                    *** PFMMSTR 004 ERROR - FIELDS MISSING FOR EMISSIONS CALCULATIONS, 0 USED FOR ESTIMATE

0620040531127040100012302005010000000212062004053A0118006 0                        E              21C
                    *** PFMMSTR 005 ERROR - NO MATCH ON MASTER FILE FOR TRANSACTION, CARD REJECTED

0620040531127000100012302005010000000232062004053A04180061         E 22100000002405              23C
                    *** PFMMSTR 005 ERROR - NO MATCH ON MASTER FILE FOR TRANSACTION, CARD REJECTED

0620040531127040100012302005010000000232062004053A04180060         E 11101                       23C
                    *** PFMMSTR 005 ERROR - NO MATCH ON MASTER FILE FOR TRANSACTION, CARD REJECTED

0620040531127040100012302005010000000232062004053A04180060         E 42101                       23C
                    *** PFMMSTR 005 ERROR - NO MATCH ON MASTER FILE FOR TRANSACTION, CARD REJECTED

0620040531127040107012302005010000000232062004053A04180060         E 42602                       23C
                    *** PFMMSTR 005 ERROR - NO MATCH ON MASTER FILE FOR TRANSACTION, CARD REJECTED

0620040531127040100012302005020200000212062004053A04180060                        I              21C
                    *** PFMMSTR 005 ERROR - NO MATCH ON MASTER FILE FOR TRANSACTION, CARD REJECTED


     NUMBER OF INPUT TRANSACTIONS READ                              75
     NUMBER OF DISASTERS DETECTED                                    0
     NUMBER OF ABORTS DETECTED                                       0
     NUMBER OF ERRORS DETECTED                                      20
     NUMBER OF CONDITIONALS DETECTED                                 0
     NUMBER OF WARNINGS DETECTED                                     0
     NUMBER OF TRANSACTIONS REJECTED                                19
     NUMBER OF POINT SOURCE FILE RECORDS READ IN                   172
     NUMBER OF POINT SOURCE FILE RECORDS WRITTEN OUT               175
```

Figure 4.3.9-c. Diagnostic Report

```
                                          EIS FILE MAINTENANCE PROGRAM - OLD MASTER LISTING                                    PAGE      1
06196005300000000100000000000000000000292  06196005300018004701  12304PL-3175       001212FFRANK  SMYTHE   59105443/69HAGINES  SMYTHE FR
06196005300000000100011000000000000000346  06196005300018004710101111412124500955571212105151520203030110547001370 9/00900100100000001
06196005300000000100012403001010000000294  061960053000180047201903001010012301200030000000400005/8023001501HENGIE
06196005300000000100012403001020200000294  061960053000180047201803001020212301200030000004000023012001501HENGIE
06196005300000000100013000000000020210172  06196005300018004730102021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
06196005300000000101271000000000000000346  0619600530001801131140111141212450095557121210515152020303011054700137 09/00900100100000001
06196005300000000101272403001010000000294  06196005300018011321240300101001230120003000000000005780230015 01HENGIE
06196005300000000101272403001020200000294  06196005300018011321240300102021230120003000000040000230120015 01HENGIE
06196005300000000101273000000000020210172  06196005300018011331402021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
06196005300000400100000000000000000000292  061960053000418014701  12304PL-3175       001212PGEORGE  SMYTHE   69105443/69PLANTS   SMYTHE FR
06196005300000400100011000000000000000346  0619600530004180147101011114121245009555712121051515202030301105470013709/00900100100000001
06196005300000400100012102023020200000294  06196005300041801472011020230202123012000300000004000163056001501CPLANTS
06196005300000400100012403001010000000294  0619600530004180147201403001010012301200030000000000005/8023001501PPLANTS
06196005300000400100013000000000020210172  061960053000418014730102021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
06196005300000400100021000000000000000346  0619600530004180148102011114121245009555712121051515202030301105470013709700900100100000001
06196005300000400100022102023020100000246  0619600530004180149202102023020112401  00396000925090163058009782CPLANT
06196005300000400100022206001970500000366  0619600530004180149202206001970520001  0050000000003000200      002902PPLANT
06196005300000400100022206001980500000222  061960053000418002320220600198051230230004000000200           003701 PLANT
06196005300000400100022301032030100000222  061960053000418014920230103203011230230004000000300           003701 PLANT
06196005300000400100022302002010100000318  061960053000418014920230200201011240100396000425000034812000978 2CPLANT
06196005300000400100022302002010500000342  06196005300041801492023020020105200010050000000030000348120002901HPLANT
06196005300000400100022302002011000000294  0619600530004180023202302002011012002  0030000000004000          002901HPLANT
06196005300000400100022302005010000000294  0619600530004190023202302005010012301200030000000000091220100150 1HPLANT
06196005300000400100022302005020200000294  0619600530004180023202302005020212301200030000000000091220100150 1HPLANT
06196005300000400100022403001010100000582  06196005300041801492024030010101123013003000000040000057802300250 1HPLANT
06196005300000400100022403001010200000318  06196005300041801492024030010102123023000400000030000000000000003701HPLANT
06196005300000400100022403001040100000222  0619600530004180149202403001040112403  0020000010000           003701 PLANT
06196005300000400100022902020200100000246  0619600530004180149202902020200112301  0030000040000           002502PPLANT
06196005300000400100022902020200200000246  0619600530004180149202902020200212901  0004000000900 0          001502CPLANT
06196005300000400100022903002010200000222  061960053000418002320290300201021230230004000000300           003701 PLANT
06196005300000400100023000000000020210172  061960053000418002330202021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79
06200405311270040100000000000000000000292  062004053A0418014701  12304PL-3175       001212PGEORGE  SMYTHE   79105443/69OIL ST    HANSON OI
06200405311270040100011000000000000000346  062004053A04180147101011114121245009555712121051515202030301105470013709/00900100100000001
06200405311270040100012302005010000000294  062004053A0418002320130200501001230120003000000040000912201001501POIL ST
06200405311270040100012302005020200000294  062004053A0418002320130200502021230120003000000040000912201001501COIL ST
06200405311270040100013000000000020210172  062004053A0418014730102021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
06200405311270040100021000000000000000346  062004053A04180148102011114121245009555712121051515202030301105470013709/00900100100000001
06200405311270040100022302005010000000294  062004053A0418002320230200501001230120003000000040000912201001501HPLANT
06200405311270040100022302005020200000246  062004053A0418002320230200502021230120003000000000009122010015 01HPLANT
06200405311270040100023000000000020210172  062004053A0418014830202021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
06200405311273301000000000000000000000292  062004053A0518004701  12304PL-3175       001212PGEORGE  SMYTHE   29105443/69HAGINES  HANSON FA
06200405311273301012710000000000000000346  062004053A05180113114011114121245009555712121051515202030301105470013709/00900100100000001
06200405311273301012723020050100000000294  062004053A0518002321430200501001230120003000000040000912201001501HENGIE
06200405311273301012723020050202000000294  062004053A0518002321430200502021230120003000000000009122010015 01HENGIE
06200405311273301012730000000000020210172  062004053A0518011331402021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
06200405311273301111210000000000000000346  062004053A05180345140011114121245009555712121051515202030301105470013709/00900100100000001
06200405311273301111223020050100000000294  062004053A0518002324830200501001230120003000000040000912201001501HENGIE
```

Figure 4.3.9-d. Input Master File Listing

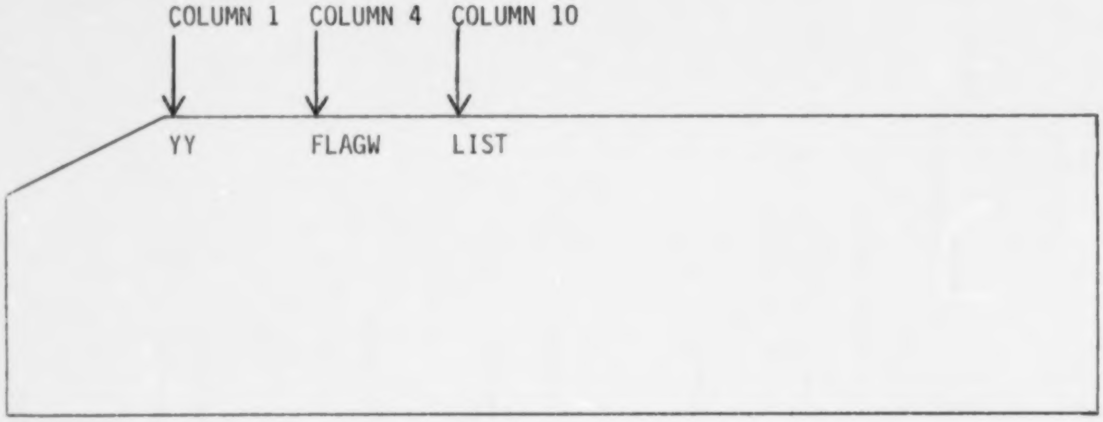


EIS FILE MAINTENANCE PROGRAM - NEW MASTER LISTING

Figure 4.3.9-e. Output Master File Listing

```
                         EIS FILE MAINTENANCE PROGRAM - TRANSACTION LISTING                                    PAGE    1

0619600530000000010000000000000000000022061960053000180065SMYTHE ENGINE COMPANY INC.                00250000035 02C
0619600530000000010000000000000000000042061960053000180065PLANT WILL START PRODUCTION 05/01/80                  04C
0619600530000000010001100000000000000131061960053000180065010319101022500220419007000105000021000003000033      13A
061960053000000001000110000000000000014206196005300018006501POLL 43101 ADDED 03/21/80                           14C
0619600530000000010001240301020200000222061960053000180065014030010202  ENGINE EXHAUST FUMES                    22C
0619600530000000010001240301020200000230061960053000180065014030010202  22100                                   23C
0619600530000000010001240301020200000242061960053000180065014030010202POLLUTANT 22100 DELETED ON                24C
0619600530000000010001240301020200000252061960053000180065014030010202 03/21/80                                 25C
06196005300000000100013000000000002001301061960053000180065 0102001LTHIS COMMENT ADDED 03/21/80                 30A
061960053000000001000130000000000002021302061960053000180065 0102021LPLANT NOW FOLLOWING GUIDELINES AS SET DOWN 12/18/7930C
061960053000000001000130000000000002021302061960053000180065 0102021N  WILL NOT BE CITED FOR VIOLATIONS         30C
061960053000000001000130000000000002022301061960053000180065 0102022LTHIS IS THE END OF THIS COMMENT            30A
0619600530000004010001100000000000000130061960053004180065 0142101                                              13C
061960053000000401000110000000000000014206196005300418006501POLL 42101 DELETED 03/21/80                         14C
061960053000000401000223020050100000000212061960053004180060                                      *             21C
061960053000000401000223020050100000000232061960053004180061          F 22100000002403                          23C
061960053000000401000223020050100000000232061960053004180060          F 11101                                   23C
061960053000000401000223020050100000000232061960053004180060          F 02602                                   23C
061960053000000401000223020050100000000232061960053004180060          F 42101                                   23C
061960053000000401000223020050202000000212061960053004180060                                      *             21C
061960053000000401000223020050202000000232061960053004180060          F 11101                                   23C
061960053000000401000223020050202000000232061960053004180060          F 02602                                   23C
061960053000000401000223020050202000000232061960053004180060          F 42101                                   23C
061960053000000401000223020050202000000232061960053004180061          F 22100000002403                          23C
06200405311270401000000000000000000000100620040530A04180065                                                     01C
062004053112704010001230200501000000002120620040530A04180060                                      *             21C
062004053112704010001230200501000000002320620040530A04180061          F 22100000002403                          23C
062004053112704010001230200501000000002320620040530A04180060          F 11101                                   23C
062004053112704010001230200501000000002320620040530A04180060          F 42101                                   23C
062004053112704010001230200501000000002320620040530A04180060          F 02602                                   23C
062004053112704010001230200502020000002120620040530A04180060                                      *             21C
062004053112704010001230200502020000002320620040530A04180060          F 42101                                   23C
062004053112704010001230200502020000002320620040530A04180060          F 02602                                   23C
062004053112704010001230200502020000002320620040530A04180061          F 22100000002403                          23C
062004053112704010001230200502020000002320620040530A04180060          F 11101                                   23C
062004053112704010002230200501000000002120620040530A04180060                                      *             21C
062004053112704010002230200501000000002320620040530A04180060          F 11101                                   23C
062004053112704010002230200501000000002320620040530A04180060          F 42101                                   23C
062004053112704010002230200501000000002320620040530A04180061          F 22100000002403                          23C
062004053112704010002230200501000000002320620040530A04180060          F 02602                                   23C
062004053112704010002230200502020000002120620040530A04180060                                      *             21C
062004053112704010002230200502020000002320620040530A04180060          F 11101                                   23C
062004053112704010002230200502020000002320620040530A04180061          F 22100000002403                          23C
062004053112733010127230200501000000002120620040530A04180060                                      *             21C
062004053112733010127230200501000000002320620040530A04180061          F 22100000002403                          23C
062004053112733010127230200501000000002320620040530A04180060          F 11101                                   23C
062004053112733010127230200501000000002320620040530A04180060          F 02602                                   23C
```

Figure 4.3.9-f. Internal Transaction Listing



Note: YY is the two-digit year to be used for editing purposes

Figure 4.3.9-g. Option Card Format

```
//* EPALPO/A087 MENGERLIN, LLOYD A. (919) 541-5491                         00000100
//*                                                                         00000200
//*    PROCEDURE NAME: EPFMM10                                              00000300
//*    REVISION LEVEL: 1-00                                                 00000400
//*    LAST UPDATE #: P-1                                                   00000500
//*    DATE INCORPORATED: FEBRUARY 1, 1980                                  00000600
//*                                                                         00000700
//*    THIS PROCEDURE ALLOWS THE USER TO MAINTAIN THE EIS/PS MASTER         00000800
//*    FILE USING PREVIOUSLY EDITED TRANSACTIONS                            00000900
//*                                                                         00001000
//*                                                                         00001100
//EPFMM10 PROC  PROJECT='C4.EPALMO.A087.COHS.00.PNT',                      00001200
//              PROG1=PSRTLTR,                                              00001300
//              PROG2=PFMMSTR,                                              00001400
//              REGION1=150K,                                               00001500
//              REGION2=150K,                                               00001600
//              TIME1='1,0',                                                00001700
//              TIME2='2,0',                                                00001800
//              OLDMSTR=EPOLDMST,                                           00001900
//              NEWMSTR=EPNEWMST,                                           00002000
//              EDITTRN=EPEDTTRN,                                           00002100
//              UNIT=3330,                                                  00002200
//              SERIAL=COHSPK,                                              00002300
//              DISP1='OLD,PASS',                                           00002400
//              DISP2='NEW,CATLG,DELETE',                                   00002500
//              SPCUNIT=TRK,                                                00002600
//              PRIMARY=20,                                                 00002700
//              SECNDRY=10,                                                 00002800
//              TEMP=SYSDA,                                                 00002900
//              WORKSPC='20,10',                                            00003000
//              OUT=A                                                       00003100
//*                                                                         00003200
//SORT    EXEC  PGM=&PROG1,                                                 00003300
//              REGION=&REGION1,                                            00003400
//              TIME=(&TIME1)                                               00003500
//*                                                                         00003600
//* SORT EIS/PS MASTER FILE INTERNAL TRANSACTIONS INTO FILE SEQUENCE       00003700
//*                                                                         00003800
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                       00003900
//              VOLUME=(PRIVATE,RETAIN),                                    00004000
//              DISP=(SHR,PASS)                                             00004100
//SORTLIB   DD DSNAME=SYS1.SORTLIB,                                         00004200
//              DISP=(SHR,PASS)                                             00004300
//*                                                                         00004400
//SORTWK01  DD UNIT=&TEMP,                                                  00004500
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                              00004600
//*                                                                         00004700
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),                                   00004800
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                              00004900
//*                                                                         00005000
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                        00005100
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                              00005200
//*                                                                         00005300
//* INPUT DATA SET - MASTER FILE INTERNAL TRANSACTIONS                      00005400
//*                                                                         00005500
//EPSTEPT   DD DSNAME=&PROJECT..DATA.&EDITTRN ,                             00005600
```

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Figure 4.3.9-h. Cataloged Procedure EPFMM10

```
//                   DISP=([illegible])                                           00005700
//*                                                                               00005800
//* OUTPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS                    00005900
//*                                                                               00006000
//FPSOUTF    DD UNIT=&TEMP,                                                       00006100
//              DISP=(NEW,PASS,DELETE),                                           00006200
//              SPACE=(TRK,(&WORKSPC),RLSE),                                      00006300
//              DSNAME=&&SORTED                                                   00006400
//*                                                                               00006500
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                           00006600
//*                                                                               00006700
//FPSDIAG    DD SYSOUT=&OUT                                                       00006800
//*                                                                               00006900
//* OUTPUT DATA SETS - SYSTEM OPERATION                                           00007000
//*                                                                               00007100
//SYSPRINT   DD SYSOUT=&OUT                                                       00007200
//*                                                                               00007300
//SYSOUT     DD SYSOUT=&OUT                                                       00007400
//*                                                                               00007500
//SYSDBOUT   DD SYSOUT=&OUT                                                       00007600
//*                                                                               00007700
//SYSOTERM   DD SYSOUT=&OUT                                                       00007800
//*                                                                               00007900
//SYSUDUMP   DD SYSOUT=&OUT                                                       00008000
//*                                                                               00008100
//*                                                                               00008200
//UPDATE   EXEC PGM=&PROG2,                                                       00008300
//              REGION=&REGION2,                                                  00008400
//              TIME=(&TIME2)                                                     00008500
//*                                                                               00008600
//* MAINTAIN EIS/PS MASTER FILE                                                   00008700
//*                                                                               00008800
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                                            00008900
//              VOLUME=(PRIVATE,RETAIN),                                          00009000
//              DISP=(SHR,PASS)                                                   00009100
//*                                                                               00009200
//* INPUT DATA SET - OPTION CARD                                                  00009300
//*                                                                               00009400
//FPSOPIN    DD DDNAME=OPTIONS,                                                   00009500
//              DCB=BLKSIZE=80                                                    00009600
//*                                                                               00009700
//* INPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS                     00009800
//*                                                                               00009900
//FPSINTR    DD DSNAME=&&SORTED,                                                  00010000
//              DISP=(SHR,PASS)                                                   00010100
//*                                                                               00010200
//* INPUT DATA SET - OLD MASTER FILE                                              00010300
//*                                                                               00010400
//FPSOLDF    DD DSNAME=&PROJECT..DATA.&OLDMSTR,                                   00010500
//              VOLUME=(PRIVATE,RETAIN),                                          00010600
//              DISP=(SHR,PASS)                                                   00010700
//*                                                                               00010800
//* OUTPUT DATA SET - NEW MASTER FILE                                             00010900
//*                                                                               00011000
//FPSNEWF    DD DSNAME=&PROJECT..DATA.&NEWMSTR,                                   00011100
//              UNIT=&UNIT,                                                       00011200
```

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Figure 4.3.9-h - continued. Cataloged Procedure EPFMM10

```
//             VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                    00011300
//             DISP=(&DISP2),                                          00011400
//             SPACE=(&SPCUNIT,(&PRIMARY,&SECNDRY),RLSE)               00011500
//*                                                                    00011600
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                00011700
//*                                                                    00011800
//EPSDIAG   DD SYSOUT=&OUT                                             00011900
//*                                                                    00012000
//* OUTPUT DATA SET - MASTER FILE INTERNAL TRANSACTION LISTING         00012100
//*                                                                    00012200
//EPSINTL   DD SYSOUT=&OUT                                             00012300
//*                                                                    00012400
//* OUTPUT DATA SET - OLD MASTER LISTING                               00012500
//*                                                                    00012600
//EPSOLD    DD SYSOUT=&OUT                                             00012700
//*                                                                    00012800
//* OUTPUT DATA SET - NEW MASTER LISTING                               00012900
//*                                                                    00013000
//EPSNEW    DD SYSOUT=&OUT                                             00013100
//*                                                                    00013200
//* OUTPUT DATA SETS - SYSTEM OPERATION                                00013300
//*                                                                    00013400
//SYSPRINT  DD SYSOUT=&OUT                                             00013500
//*                                                                    00013600
//SYSOUT    DD SYSOUT=&OUT                                             00013700
//*                                                                    00013800
//SYSDBOUT  DD SYSOUT=&OUT                                             00013900
//*                                                                    00014000
//SYSDTERM  DD SYSOUT=&OUT                                             00014100
//*                                                                    00014200
//SYSUDUMP  DD SYSOUT=&OUT                                             00014300
//*                                                                    00014400
```

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Figure 4.3.9-h - continued. Cataloged Procedure EPFMM10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPOLDMST would be the full data set name of the old master file)
PROG1	PSRINTR	Master file internal transaction sort program
PROG2	PFMMSTR	Master file maintenance program
REGION1	100K	Region size allocated for execution of PSRINTR
REGION2	150K	Region size allocated for execution of PFMMSTR
TIME1	'1,0'	Time allocated for execution of PSRINTR
TIME2	'2,0'	Time allocated for execution of PFMMSTR
OLDMSTR	EPOLDMST	Lowest-level index of old master file
NEWMSTR	EPNEWMST	Lowest-level index of new (or updated) master file
UNIT	3330	Unit type to which new (or updated) master file is to be written
SERIAL	CDHSPK	Serial number of volume to which new (or updated) master file is to be written
DISP1	'OLD,DELETE'	Disposition of internal transactions
DISP2	'NEW,CATLG, DELETE'	Disposition of new (or updated) master file
SPCUNIT	TRK	Units in which space for new (or updated) master file is to be allocated
PRIMARY	20	Primary space allocation for new (or updated) master file
SECNDRY	10	Secondary space allocation for new (or updated) master file
TEMP	SYSDA	Unit type for temporary work space

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Figure 4.3.9-i. Substitutable Parameters for EPFMM10

Parameter Name	Default Value	Description
WORKSPC	'20,10'	Space allocation for sort work areas
INTRTRN	EPINTERN	Lowest-level index of unsorted internal transactions
OUT	A	SYSOUT class for all print files

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Figure 4.5.9-i - continued. Substitutable Parameters for EPFMM10

4.3.10 MASTER FILE EMISSION FACTOR TRANSACTION GENERATOR PROGRAM - PMSEFGN (EP0130)

4.3.10.1 Description

PMSEFGN (EP0130) generates EIS/PS 21 and 23 internal transactions to update the emission factor information in the master file SCC records. The transactions created by PMSEFGN (EP0130) must be sorted by the master file internal transaction pre-insertion sort program, PSREFIN (EP0090), and processed by the master file internal transaction emission factor insertion program, PMSEFIN (EP0100), before they can be used to update the master file. See Section 4.3.6 for information on PSREFIN (EP0110) and Section 4.3.7 for information on PMSEFIN (EP0100).

PMSEFGN (EP0130) will only generate transactions for one user-specified origin/source combination per run and will only compare the master file to the first 2500 emission factor records with the same origin/source combination and with a date equal to or more recent than a user-specified date. In addition, the date of a master file record must be earlier than this user-specified date for any transactions to be generated for that record. The origin/source combination and the date are specified by an option card, which is discussed in Section 4.3.10.3.

PMSEFGN (EP0130) generates one 21 change internal transaction for each SCC record in the master file that satisfies the origin/source and date criteria and for which the matching emission factor file record satisfies the date criterion. One 23 change internal transaction is generated for each of the pollutant ID's contained in the master file record. The date of the generated transactions will be the same as the date specified on the option card. This date will be changed by PMSEFIN (EP0100) to that of the matching emission factor file record.

The generated transactions must be processed by PMSEFIN (EP0100) to have the sulfur content, ash content, and emission factor inserted into the appropriate fields. They must then be sorted by the master file internal transaction sort program, PSRINTR (EP0110), and processed by the master file maintenance program, PFMMSTR (EP0120).

4.3.10.2 File Formats

PMSEFGN (EP0130) uses three input files: the EIS/PS master file, the EIS/PS emission factor file, and an option card. See Figure 4.3.9-a for the format of the master file and Figure 4.2.5-a for that of the emission factor file. The option card is discussed in Section 4.3.10.3.

Three output files are produced: a diagnostic report, a file containing the generated internal transactions, and a file containing an option card to be passed to PMSEFIN (EP0100).

The format of the output option card is the same as that shown in Figure 4.3.7-c. The options specified for PMSEFIN (EP0100) are as follows:

1. Insert sulfur and ash contents
2. Insert emission factor
3. EDAT=XXYYY, where XXYYY is equal to the date specified for PMSEFGN (EP0130)
4. Replace the date of the transaction with the emission factor file date
5. The same warning message suppression option as specified for PMSEFGN (EP0130).

For a complete description of these options, see Section 4.3.7.3.

The output transactions are in master file internal transaction format (see Figure 4.3.5-c) but must be processed by PMSEFIN (EP0100) before being used to update the master file.

The diagnostic report contains the update messages, program statistics, option messages, and error messages; see Figure 4.3.10-a for a sample diagnostic report.

4.3.10.3 Options and Control Cards

An option card is input to PMSEFGN (EP0130) to specify the origin/source combination and date and to specify whether or not warning messages should be printed. All options are specified in fixed fields on the option card; see Figure 4.3.10-b for the format of the option card.

The user must specify an origin/source combination to be satisfied by both the emission factor file records and the master file records. If transactions are desired for Federal-origin SCC records, the user must code an origin of 'F' in column 1 of the option card; for State-origin records, he must code 'S' in column 1; and for Local-origin records, he must code 'L' in column 1 and the desired source in column 2. If no origin/source combination is specified, or if an invalid combination is specified, program execution will be terminated.

The user must also specify a date to be satisfied by both the emission factor file records and the master file records. The date of the emission factor file record must be greater than or equal to the specified date and the date of the master file record must be less than the specified date for a transaction to be generated. The date is specified by coding a five-digit Julian date in columns 8 through 12 of the option card, where the first two digits represent the year and the last three, the day within the year. If no date is specified, or if the date is not numeric, program execution will be terminated.

If 'FLAGW' is coded in the warning message suppression field (columns 18 through 24) of the option card, all warning messages will be printed in the diagnostic report; if 'NOFLAGW' is coded, no warning messages will be printed. If this field is left blank or improperly coded, a default of NOFLAGW is assumed.

4.3.10.4 Error Messages

PMSEFGN 001 ABORT - INVALID DATE SPECIFIED

Meaning: No date was specified, or a nonnumeric value was specified for the date therefore, program execution was terminated.

Action: Correct the option card and resubmit the job.

PMSEFGN 002 ABORT - INVALID ORIGIN/SOURCE SPECIFIED

Meaning: A value other than 'F', 'S', or 'L' was coded for the origin, or a source was specified for an origin other than 'L'.

Action: Correct the option card and resubmit the job.

PMSEFGN 003 ABORT - EMISSION FACTOR FILE CONTAINS ONLY A HEADER RECORD

Meaning: The emission factor file specified for this run contains no records except the header record; therefore, program execution was terminated.

Action: Specify a valid emission factor file and resubmit the job.

PMSEFGN 004 WARNING - NO MATCHING EMISSION FACTOR FILE RECORD FOR ORIGIN/SOURCE AND DATE SPECIFIED

Meaning: There is no emission factor file record to match the specified master file record.

Action: None required.

PMSEFGN 005 WARNING - NO TRANSACTION GENERATED DUE TO MASTER FILE DATE

Meaning: No transaction was generated since the date of the master file record was greater than or equal to the user-specified date.

Action: If a transaction is required for this record, specify a different date on the option and resubmit the job.

PMSEFGN 006 ERROR - INVALID FLAGW OPTION SPECIFIED - NOFLAGW ASSUMED

Meaning: The warning message suppression option was incorrectly specified; therefore, the default option, NOFLAGW, was assumed.

Action: If a listing of all warning messages is required, correct the option card and resubmit the job.

PMSEFGN 007 ABORT - INVALID EMISSION FACTOR FILE SPECIFIED

Meaning: The specified emission factor file has an invalid header record; therefore, program execution was terminated.

Action: Specify a valid emission factor file and resubmit the job.

PMSEFGN 008 ABORT - NO OPTION CARD

Meaning: No option card was entered; therefore, program execution was terminated.

Action: Enter an option card specifying a valid origin/source and a valid date and resubmit the job.

PMSEFGN 009 ERROR - EMISSION FACTOR FILE CONTAINS MORE THAN THE MAX NO OF SCC

Meaning: The emission factor file contains more than 2500 records that satisfy the origin/source and date criteria. Only the first 2500 records are processed.

Action: See Appendix B for instructions on increasing the number of emission factor file records allowed by PMSEFGN (EP0130) if the additional records are required.

4.3.10.5 Cataloged JCL

4.3.10.5.1 JCL listing - PMSEFGN (EP0130) is executed by the cataloged procedure EPMSM10. This procedure also executes PSREFIN (EP0090) and PMSEFIN (EP0100). See Figure 4.3.10-c for a listing of EPMSM10.

4.3.10.5.2 Cross-reference of DD names and files

Program Name: PMSEFGN (EP0130)

DD Name	File Description	Input/Output
EPSMSTR	EIS/PS master file	Input
EPSEMFC	EIS/PS emission factor file	Input
EPSOPTN	Option card	Input
EPSOUTP	Internal transactions	Output
EPSOPTO	Option card for PMSEFIN (EP0100)	Output
EPSDIAG	Diagnostic report	Output

Program Name: PSREFIN (EP0090)

DD Name	File Description	Input/Output
EPSINPT	Unsorted internal transactions	Input
SORTWK01	Sort work file	Internal
EPSOUTP	Sorted internal transactions	Output
EPSDIAG	Diagnostic report	Output

Program Name: PMSEFIN (EP0100)

DD Name	File Description	Input/Output
EPSOPTN	Option card	Input
EPSINPT	Sorted internal transactions	Input
EPSEMFC	EIS/PS emission factor file	Input
EPSOUTP	Internal transactions with insertions	Output
EPSDIAG	Diagnostic report	Output

4.3.10.5.3 User-supplied JCL - To execute the cataloged procedure EPMSM10, the user must specify the data set names of the EIS/PS master file, the EIS/PS emission factor file, and the file of generated internal transactions. An option card must be included to specify the origin/source and date criteria. See Figure 4.3.10-d for a description of the procedure's substitutable parameters.

4.3.10.5.4 Sample run stream - The following run stream would generate internal transactions for the EIS/PS master file 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.PSMSTR', using the EIS/PS emission factor file 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.ASEMFL'. The file containing the generated transactions would be named 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.PSINTR'. Note that the NOFLAGW option, Federal origin and a date of 79341 are specified.

```
// EXEC EPMSM10,
//      MSTRFIL=PSMSTR,
//      EMFCFIL=PSEMFL,
//      INTRTRN=PSINTR
//GENER.OPTIONS   DD *
F      79341      NOFLAGW
/*
```

4.3.10.6 Warnings and Special Instructions

Transactions are generated for only one origin/source combination per run. The master file and emission factor file records must both satisfy a user-specified date criterion for any transactions to be generated.

PMSEFGN (EP0130) will process only 2500 emission factor file records that satisfy the user-specified origin/source and date criteria. If additional emission factor file records are required, PMSEFGN (EP0130) will have to be modified to accept them; see Appendix B for instructions on modifying PMSEFGN (EP0130).

The generated transactions are not complete and must be processed by the master file internal transaction emission factor insertion program, PMSEFIN (EP0100), before being used to update the master file. The cataloged procedure EPMSM10 executes PMSEFGN (EP0130), PSREFIN (EP0090), and PMSEFIN (EP0100).

4.3.10.7 Cost Considerations

The estimates listed below are for the execution of PMSEFGN (EP0130) on an IBM 370/168:

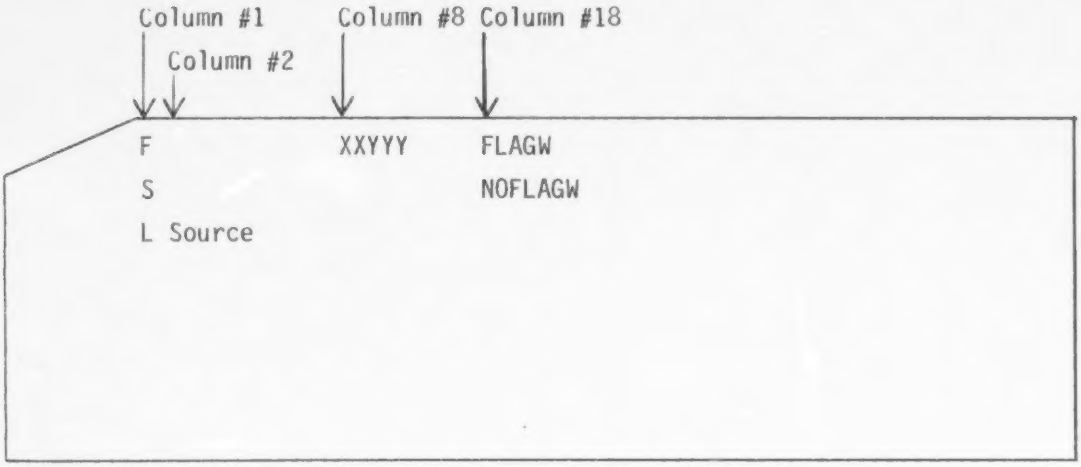
Number of master file records:	172 records
Number of emission factor file records:	638 records
Number of 21 transactions:	10 transactions
Number of 23 transactions:	38 transactions
CPU time:	.61 seconds
I/O time:	1.34 seconds
Total time:	1.95 seconds
Estimated cost:	$.27

4.3.10.8 Related Programs and Procedures

The cataloged procedure EPFMM30 executes PMSEFGN (EP0130) to generate internal transactions, PSREFIN (EP0090) to sort the generated transactions, PMSEFIN (EP0100) to make insertions into the transactions, PSRINTR (EP0110) to sort the completed transactions, and PFMMSTR (EP0120) to update the master file with the transactions. See Section 4.4.5 for information on EPFMM30.

```
                 MASTER FILE EMISSION FACTOR TRANSACTION GENERATOR PROGRAM                          PAGE    1


PROGRAM NAME: PMSEFGN (EP0130)
REVISION LEVEL:  1-00
LAST UPDATE #:   P-1
DATE INCORPORATED:  FEBRUARY 1, 1980


OPTIONS IN EFFECT:  FLAGM

        ORIGIN AND SOURCE SPECIFIED:  FEDERAL

        DATE SPECIFIED:  80060


0619600530000040100022206001980500000
          *** PMSEFGN 004 WARNING - NO MATCHING EMISSION FACTOR FILE RECORD FOR ORIGIN/SOURCE AND DATE SPECIFIED

0619600530000040100022302002011000000
          *** PMSEFGN 004 WARNING - NO MATCHING EMISSION FACTOR FILE RECORD FOR ORIGIN/SOURCE AND DATE SPECIFIED



NUMBER OF MASTER FILE RECORDS READ:                172
NUMBER OF EMISSION FACTOR RECORDS READ:            638
NUMBER OF 21 TRANSACTIONS CREATED:                  10
NUMBER OF 23 TRANSACTIONS CREATED:                  38
NUMBER OF WARNING MESSAGES:                         50
NUMBER OF CONDITIONAL MESSAGES:                      0
NUMBER OF ERROR MESSAGES:                            0
NUMBER OF ABORT MESSAGES:                            0
NUMBER OF DISASTER MESSAGES:                         0
```

Figure 4.3.10-a. Diagnostic Report



Note: XX denotes the year; YYY the Julian date

Figure 4.3.10-b. Option Card Format

```
//* EPALMH/A087 HEDGEPETH, LLOYD M. (919) 541-5491                    00000100
//*                                                                   00000200
//*    PROCEDURE NAME: EPMSM10                                        00000300
//*    REVISION LEVEL: 1-00                                           00000400
//*    LAST UPDATE #: P-1                                             00000500
//*    DATE INCORPORATED: FEBRUARY 1, 1980                            00000600
//*                                                                   00000700
//*    THIS PROCEDURE ALLOWS THE USER TO CREATE                       00000800
//*    EIS/PS INTERNAL EMISSION FACTOR TRANSACTIONS                   00000900
//*                                                                   00001000
//*                                                                   00001100
//EPMSM10 PROC PROJECT='CN.EPALMH.A087.CDHS.00.PM1',                  00001200
//             PROG1=PMSEFGN,                                         00001300
//             PROG2=PMSEFED,                                         00001400
//             PROG3=PMSEFTD,                                         00001500
//             REGION1=100K,                                          00001600
//             REGION2=150K,                                          00001700
//             REGION3=100K,                                          00001800
//             TIME1='1,0',                                           00001900
//             TIME2='1,0',                                           00002000
//             TIME3='1,0',                                           00002100
//             EMFCFIL=EMFFIL,                                        00002200
//             MSTRFIL=OLDMST,                                        00002300
//             [illegible],                                           00002400
//             UNIT=3330,                                             00002500
//             SERIAL=CDHSPK,                                         00002600
//             DISP='NEW,CATLG,DELETE',                               00002700
//             SPCUNT1=TRK,                                           00002800
//             SPCUNT2=TRK,                                           00002900
//             PRMRY1=20,                                             00003000
//             PRMRY2=20,                                             00003100
//             SCNDRY1=10,                                            00003200
//             SCNDRY2=10,                                            00003300
//             TEMP=SYSDA,                                            00003400
//             OUT=A                                                  00003500
//*                                                                   00003600
//GENER    EXEC PGM=&PROG1,                                           00003700
//             REGION=&REGION1,                                       00003800
//             TIME=(&TIME1)                                          00003900
//*                                                                   00004000
//*  GENERATE EIS/PS INTERNAL EMISSION FACTOR TRANSACTIONS            00004100
//*                                                                   00004200
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                                00004300
//             VOLUME=(PRIVATE,RETAIN),                               00004400
//             DISP=(SHR,PASS)                                        00004500
//*                                                                   00004600
//*  INPUT DATA SET - EIS/PS EMISSION FACTOR FILE                     00004700
//*                                                                   00004800
//EPSEMFC    DD DSNAME=&PROJECT..DATA.&EMFCFIL,                       00004900
//             VOLUME=(PRIVATE,RETAIN),                               00005000
//             DISP=(SHR,PASS)                                        00005100
//*                                                                   00005200
//*  INPUT DATA SET - EIS/PS MASTER FILE                              00005300
//*                                                                   00005400
//EPSMSTR    DD DSNAME=&PROJECT..DATA.&MSTRFIL,                       00005500
//             VOLUME=(PRIVATE,RETAIN),                               00005600
```

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Figure 4.3.10-c. Cataloged Procedure EPMSM10

```
//             DISP=(SHR,PASS)                                          00005700
//*                                                                     00005800
//*  INPUT DATA SET - OPTION CARD                                       00005900
//*                                                                     00006000
//EPSOPIN   DD DDNAME=OPTIONS,                                          00006100
//             DCB=BLKSIZE=80                                           00006200
//*                                                                     00006300
//*  OUTPUT DATA SET - EIS/PS INTERNAL EMISSION FACTOR TRANSACTIONS     00006400
//*                                                                     00006500
//EPSOUTP   DD DSNAME=&&TRANS,                                          00006600
//             UNIT=&TEMP,                                              00006700
//             DISP=(NEW,PASS,DELETE),                                  00006800
//             SPACE=(&SPCUNT1,(&PRMRY1,&SCNDRY1),RLSE)                 00006900
//*                                                                     00007000
//*  OUTPUT DATA SET - OPTION CARD FOR PMSEFIN                          00007100
//*                                                                     00007200
//EPSOPTO   DD DSNAME=&&CARD,                                           00007300
//          DISP=(NEW,PASS,DELETE),                                     00007400
//          UNIT=&TEMP,                                                 00007500
//          SPACE=(TRK,1)                                               00007600
//*  OUTPUT DATA SET - DIAGNOSTIC REPORT                                00007700
//*                                                                     00007800
//EPSDIAG   DD SYSOUT=&OUT                                              00007900
//*                                                                     00008000
//*  OUTPUT DATA SETS - SYSTEM OPERATION                                00008100
//*                                                                     00008200
//SYSOUT    DD SYSOUT=&OUT                                              00008300
//*                                                                     00008400
//SYSPRINT  DD SYSOUT=&OUT                                              00008500
//*                                                                     00008600
//SYSUDOUT  DD SYSOUT=&OUT                                              00008700
//*                                                                     00008800
//SYSDTERM  DD SYSOUT=&OUT                                              00008900
//*                                                                     00009000
//SYSUDUMP  DD SYSOUT=&OUT                                              00009100
//*                                                                     00009200
//*                                                                     00009300
//SORT    EXEC PGM=&PROG2,                                              00009400
//             REGION=&REGION2,                                         00009500
//             TIME=(&TIME2)                                            00009600
//*                                                                     00009700
//* SORT EIS/PS MASTER FILE INTERNAL TRANSACTIONS INTO FILE SEQUENCE    00009800
//*                                                                     00009900
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00010000
//             VOLUME=(PRIVATE,RETAIN),                                 00010100
//             DISP=(SHR,PASS)                                          00010200
//SORTLIB   DD DSNAME=SYS1.SORTLIB,                                     00010300
//             DISP=(SHR,PASS)                                          00010400
//*                                                                     00010500
//SORTWK01  DD UNIT=&TEMP,                                              00010600
//             SPACE=(&SPCUNT2,(&PRMRY2,&SCNDRY2),,CONTIG)              00010700
//*                                                                     00010800
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),                               00010900
//             SPACE=(&SPCUNT2,(&PRMRY2,&SCNDRY2),,CONTIG)              00011000
//*                                                                     00011100
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                    00011200
```

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Figure 4.3.10-c - continued. Cataloged Procedure EPMSM10

```
//              SPACE=(&SPCUNIT2,(&PRMARY2,&SCNDRY2),,CONTIG)                  00011300
//*                                                                            00011400
//* INPUT DATA SET - MASTER FILE INTERNAL TRANSACTIONS                         00011500
//*                                                                            00011600
//EPSINPT    DD DSNAME=&&TRANS,                                                00011700
//              DISP=(SHR,PASS)                                                00011800
//*                                                                            00011900
//* OUTPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS                 00012000
//*                                                                            00012100
//EPSOUTP    DD DSNAME=&&SORTED,                                               00012200
//              UNIT=&TEMP,                                                    00012300
//              DISP=(NEW,PASS,DELETE),                                        00012400
//              SPACE=(&SPCUNIT1,(&PRMARY1,&SCNDRY1),RLSE)                     00012500
//*                                                                            00012600
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                        00012700
//*                                                                            00012800
//EPSDIAG    DD SYSOUT=&OUT                                                    00012900
//*                                                                            00013000
//* OUTPUT DATA SETS - SYSTEM OPERATION                                        00013100
//*                                                                            00013200
//SYSPRINT  DD SYSOUT=&OUT                                                     00013300
//*                                                                            00013400
//SYSOUT     DD SYSOUT=&OUT                                                    00013500
//*                                                                            00013600
//SYSDBOUT   DD SYSOUT=&OUT                                                    00013700
//*                                                                            00013800
//SYSUTERM   DD SYSOUT=&OUT                                                    00013900
//*                                                                            00014000
//SYSUDUMP   DD SYSOUT=&OUT                                                    00014100
//*                                                                            00014200
//*                                                                            00014300
//INSERT   EXEC PGM=&PROG3,                                                    00014400
//             REGION=&REGION3,                                                00014500
//             TIME=(&TIME3)                                                   00014600
//*                                                                            00014700
//* INSERT EMISSION FACTORS                                                    00014800
//*                                                                            00014900
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                                         00015000
//             VOLUME=(PRIVATE,RETAIN),                                        00015100
//             DISP=(SHR,PASS)                                                 00015200
//*                                                                            00015300
//* INPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS                  00015400
//*                                                                            00015500
//EPSINPT    DD DSNAME=&&SORTED,                                               00015600
//              DISP=(SHR,PASS)                                                00015700
//*                                                                            00015800
//* INPUT DATA SET - OPTION CARD                                               00015900
//*                                                                            00016000
//EPSOPTN    DD DSNAME=&&CARD,                                                 00016100
//           DISP=(OLD,PASS)                                                   00016200
//*                                                                            00016300
//* INPUT DATA SET - EIS/PS EMISSION FACTOR FILE                               00016400
//*                                                                            00016500
//EPSEFFL    DD DSNAME=&PROJECT..DATA.&EMFILE,                                 00016600
//             VOLUME=(PRIVATE,RETAIN),                                        00016700
//             DISP=(SHR,PASS)                                                 00016800
```

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Figure 4.3.10-c - continued. Cataloged Procedure EPMSM10

```
//*                                                                   00016900
//* OUTPUT DATA SET - INTERNAL TRANSACTIONS WITH EMISSION FACTORS     00017000
//*                                                                   00017100
//EPSOUTP   DD DSNAME=&PROJECT..DATA.&SEMIPTR,                        00017200
//             VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                   00017300
//             DISP=(&DISP),                                          00017400
//             UNIT=&UNIT,                                            00017500
//             SPACE=(&SPCUNIT,(&PRMARY,&SCNDRY),RLSE)                00017600
//*                                                                   00017700
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                               00017800
//*                                                                   00017900
//EPSDIAG   DD SYSOUT=&OUT                                            00018000
//*                                                                   00018100
//* OUTPUT DATA SETS - SYSTEM OPERATION                               00018200
//*                                                                   00018300
//SYSPRINT  DD SYSOUT=&OUT                                            00018400
//*                                                                   00018500
//SYSOUT    DD SYSOUT=&OUT                                            00018600
//*                                                                   00018700
//SYSDBOUT  DD SYSOUT=&OUT                                            00018800
//*                                                                   00018900
//SYSDTERM  DD SYSOUT=&OUT                                            00019000
//*                                                                   00019100
//SYSUDUMP  DD SYSOUT=&OUT                                            00019200
//*                                                                   00019300
//*                                                                   00019400
```

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Figure 4.3.10-c - continued. Cataloged Procedure EPMSM10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087 CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA. EMFFIL would be the full data set name of the emission factor file)
PROG1	PMSEFGN	Master file emission factor transaction generator program
PROG2	PSREFIN	Master file internal transaction pre-insertion sort program
PROG3	PMSEFIN	Master file internal transaction emission factor insertion program
REGION1	100K	Region size allocated for execution of PMSEFGN
REGION2	150K	Region size allocated for execution of PSREFIN
REGION3	100K	Region size allocated for execution of PMSEFIN
TIME1	'1,0'	Time allocated for execution of PMSEFGN
TIME2	'1,0'	Time allocated for execution of PSREFIN
TIME3	'1,0'	Time allocated for execution of PMSEFIN
EMFCFIL	EMFFIL	Lowest-level index of emission factor file
MSTRFIL	OLDMST	Lowest-level index of master file
NEWINTR	NEWINT	Lowest-level index of generated internal transaction file from PMSEFIN
UNIT	3330	Unit type to which internal transaction file from PMSEFIN is to be written

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Figure 4.3.10-d. Substitutable Parameters for EPMSM10

Parameter Name	Default Value	Description
SERIAL	CDHSPK	Serial number of volume to which internal transaction file from PMSEFIN is to be written
DISP	'NEW,CATLG, DELETE'	Disposition of internal transaction file from PMSEFIN
SPCUNT1	TRK	Units in which space for internal transactions from PMSEFGN and PMSEFIN is to be allocated
SPCUNT2	TRK	Units in which space for work files is to be allocated
PRMRY1	20	Primary space allocation for internal transactions from PMSEFGN and PMSEFIN
PRMRY2	20	Primary space allocation for work files
SCNDRY1	10	Secondary space allocation for internal transactions from PMSEFGN and PMSEFIN
SCNDRY2	10	Secondary space allocation for work files
OUT	A	SYSOUT class for all print files

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Figure 4.3.10-d - continued. Substitutable Parameters for EPMSM10

4.4 MULTI-PROGRAM PROCEDURES

4.4.1. INTRODUCTION

The cataloged procedures EPEME20, EPEMM10, EPFMM20, and EPFMM30 allow the user to combine various file creation and maintenance functions into one job step.

EPEME20 creates or updates the emission factor files using NEDS emission factor file transactions. It executes the NEDS emission factor file transaction sort program, PSRNEEF (EP0010); the NEDS to EIS/PS emission factor file transaction conversion program, PCVNEEF (EP0020); the emission factor file transaction sort program, PSREFTR (EP0030); and the emission factor file edit-maintenance program, PEMEFAC (EP0040).

EPEMM10 edits master file transactions and creates or updates the master file. The programs executed by this procedure are the master file transaction sort program, PSRMFTR (EP0070); the master file transaction edit program, PEDMSTR (EP0080); the master file internal transaction pre-insertion sort program, PSREFIN (EP0090); the master file internal transaction emission factor insertion program, PMSEFIN (EP0100); the master file internal transaction sort program, PSRINTR (EP0110); and the master file maintenance program, PFMMSTR (EP0120).

EPFMM20 allows the user to create or update the master file using NEDS transactions. This procedure executes the NEDS transaction sort program, PSRNETR (EP0050); the NEDS to EIS/PS master file transaction conversion-edit program, PCENETR (EP0060); the master file internal transaction pre-insertion sort program, PSREFIN (EP0090); the master file internal transaction emission factor insertion program, PMSEFIN (EP0100); the master file internal transaction sort program, PSRINTR (EP0110); and the master file maintenance program, PFMMSTR (EP0120).

EPFMM30 creates or updates the master file using transactions generated from the emission factor file. This procedure executes the master file emission factor transaction generator program, PMSEFGN (EP0130); the master file internal transaction pre-insertion sort program, PSREFIN (EP0090); the master file internal transaction emission factor insertion program, PMSEFIN (EP0100); the master file internal transaction sort program, PSRINTR (EP0110); and the master file maintenance program, PFMMSTR (EP0120).

Refer to Sections 4.4.2, 4.4.3, 4.4.4, and 4.4.5 for detailed discussions of EPEME20, EPEMM10, EPFMM20, and EPFMM30, respectively.

4.4.2 EMISSION FACTOR FILE EDIT-MAINTENANCE FROM NEDS EMISSION FACTOR FILE TRANSACTIONS - EPEME20

4.4.2.1 Description

The cataloged procedure EPEME20 allows the user to convert NEDS emission factor file transactions and use the converted transactions to update (or create) the EIS/PS emission factor file. This procedure executes the NEDS emission factor file transaction sort program, PSRNEEF (EP0010); the NEDS to EIS/PS emission factor file transaction conversion program, PCVNEEF (EP0020); the emission factor file transaction sort program, PSREFTR (EP0030), and the emission factor file edit-maintenance program, PEMEFAC (EP0040).

4.4.2.2 JCL Listing

See Figure 4.4.2-a for a listing of this procedure.

4.4.2.3 Cross-reference of DD Names and Files

Program Name: PSRNEEF (EP0010)

DD Name	File Description	Input/Output
EPSINPT	Unsorted NEDS emission factor file transactions	Input
EPSOUTP	Sorted NEDS emission factor file transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PCVNEEF (EP0020)

DD Name	File Description	Input/Output
EPSINPT	Sorted NEDS emission factor file transactions	Input
EPSOPTN	Option Card	Input

DD Name	File Description	Input/Output
EPSOUTP	EIS/PS emission factor file transactions	Output
EPSDIAG	Diagnostic report	Output
EPSTRNL	Emission factor file transaction listing	Output

Program Name: PSREFTR (EP0030)

DD Name	File Description	Input/Output
EPSINPT	Unsorted emission factor file transactions	Input
EPSOUTP	Sorted emission factor file transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PEMEFAC (EP0040)

DD Name	File Description	Input/Output
EPSTRAN	Sorted emission factor file transactions	Input
EPSOPTN	Option card	Input
EPSOLEF	Old emission factor file	Input
EPSOLDS	Old emission factor description file	Input
EPSNWEF	New emission factor file	Output
EPSNWDS	New emission factor description file	Output
EPSDIAG	Diagnostic report	Output
EPSTRNL	Transaction listing	Output
EPSOEFL	Old emission factor file listing	Output
EPSODFL	Old emission factor description file listing	Output
EPSNEFL	New emission factor file listing	Output
EPSNDFL	New emission factor description file listing	Output

4.4.2.3 User-supplied JCL

To execute the cataloged procedure EPEME20, the user must supply job accounting information, input transactions, the data set names of both the old and the updated (or new) emission factor file and emission factor description file, and option cards to specify any desired options. See Figure 4.4.2-b for a description of the procedure's substitutable parameters.

4.4.2.4 Sample Run Stream

The following run stream illustrates the use of EPEME20 to create the EIS/PS emission factor file and emission factor description file from input transactions stored in a disk data set named 'CN.EPALMH.A087.HQ.PNT.DATA.NEDEMFT'. The new emission factor file will be named 'CN.EPALMH.A087.HQ.PNT.DATA.EPEMFL1' and the description file will be named 'CN.EPALMH.A087.HQ.PNT.DATA.EPEMFD1'. A date of 80347, but no list options, are specified for PCVNEEF (EP0020) and PEMEFAC (EP0040).

```
//EXEC  EPEME20,
//      NEWEMFC=EPEMFL1,
//      NEWDESC=EPEMFD1
//SORT1.INPUT DD DSN=CN.EPALMH.A087.HQ.PNT.DATA.NEDEMFT
//CONVERT.OPTIONS DD *
              80347
//UPDATE.EPSOLEF DD DUMMY
//UPDATE.EPSOLDS DD DUMMY
//UPDATE.OPTIONS DD *
80347
```

```
//* EPALMH/A087 HEDGEPETH, LLOYD M. (919) 541-5491
//*
//*    PROCEDURE NAME: EPEME20
//*    REVISION LEVEL: 1-00
//*    LAST UPDATE #: P-1
//*    DATE INCORPORATED:FEBRUARY 1, 1980
//*
//*    THIS PROCEDURE ALLOWS THE USER TO UPDATE THE EIS/PS EMISSION
//*    FACTOR FILE USING NEDS EMISSION FACTOR FILE TRANSACTIONS
//*
//*
//EPEME20 PROC PROJECT='CO.EPALMH.A087.CODS.NQ.PHI',
//               PROG1=PSRQEFF,
//               PROG2=PCVMEFF,
//               PROG3=PSREFTF,
//               PROG4=PEMEFAC,
//               REGION1=150K,
//               REGION2=100K,
//               REGION3=150K,
//               REGION4=100K,
//               TIME1='1,0',
//               TIME2='1,0',
//               TIME3='1,0',
//               TIME4='1,0',
//               OLDEMFC=EPOLDEMF,
//               OLDDESC=EPOLDDSC,
//               NEWEMFC=EPNEWEMF,
//               NEWDESC=EPNEWDSC,
//               UNIT1=3330,
//               UNIT2=3330.
//               SERIAL1=COMSPK,
//               SERIAL2=COMSPK,
//               DISP1='NEW,CATLG,DELETE',
//               DISP2='NEW,CATLG,DELETE',
//               SPCUNT1=TRK,
//               SPCUNT2=TRK,
//               PRIMRY1=20,
//               PRIMRY2=20,
//               SECNDY1=10,
//               SECNDY2=10,
//               TEMP=SYSDA,
//               WORKSPC='20,10',
//               OUT=A
//*
//SORT1    EXEC  PGM=&PROG1,
//               REGION=&REGION1,
//               TIME=(&TIME1)
//*
//* SORT NEDS EMISSION FACTOR FILE TRANSACTIONS INTO FILE SEQUENCE
//*
//STEPLIB    DD DSNAME=&PROJECT..LOAD,
//               VOLUME=(PRIVATE,RETAIN),
//               DISP=(SHR,PASS)
//SORTLIB    DD DSNAME=SYS1.SORTLIB,
//               DISP=(SHR,PASS)
//*
```

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Figure 4.4.2-a. Cataloged Procedure EPEME20

```
//SORTWK01  DD UNIT=&TEMP,                                              00005700
//             SPACE=(TRK,(&WORKSPC),,CONTIG)                           00005800
//*                                                                     00005900
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),                               00006000
//             SPACE=(TRK,(&WORKSPC),,CONTIG)                           00006100
//*                                                                     00006200
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                    00006300
//             SPACE=(TRK,(&WORKSPC),,CONTIG)                           00006400
//*                                                                     00006500
//* INPUT DATA SET - NEDS EMISSION FACTOR FILE TRANSACTIONS             00006600
//*                                                                     00006700
//EPSINPT   DD DDNAME=INPUT,                                            00006800
//             DCB=BLKSIZE=80                                           00006900
//*                                                                     00007000
//* OUTPUT DATA SET - SORTED NEDS EMISSION FACTOR FILE TRANSACTIONS     00007100
//*                                                                     00007200
//EPSOUTP   DD DSNAME=&&SORTOUT,                                        00007300
//             UNIT=&TEMP,                                              00007400
//             DISP=(NEW,PASS,DELETE),                                  00007500
//             SPACE=(TRK,(&WORKSPC),RLSE)                              00007600
//*                                                                     00007700
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00007800
//*                                                                     00007900
//EPSDIAG   DD SYSOUT=&OUT                                              00008000
//*                                                                     00008100
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00008200
//*                                                                     00008300
//SYSPRINT  DD SYSOUT=&OUT                                              00008400
//*                                                                     00008500
//SYSOUT    DD SYSOUT=&OUT                                              00008600
//*                                                                     00008700
//SYSDBOUT  DD SYSOUT=&OUT                                              00008800
//*                                                                     00008900
//SYSUTERM  DD SYSOUT=&OUT                                              00009000
//*                                                                     00009100
//SYSUDUMP  DD SYSOUT=&OUT                                              00009200
//*                                                                     00009300
//*                                                                     00009400
//*                                                                     00009500
//CONVERT EXEC PGM=&PROG2,                                              00009600
//             REGION=&REGION2,                                         00009700
//             TIME=(&TIME2)                                            00009800
//*                                                                     00009900
//* CONVERT NEDS EMISSION FACTOR FILE TRANSACTIONS TO EIS/PS EMISSION   00010000
//* FACTOR FILE TRANSACTIONS                                            00010100
//*                                                                     00010200
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00010300
//             VOLUME=(PRIVATE,RETAIN),                                 00010400
//             DISP=(SHR,PASS)                                          00010500
//*                                                                     00010600
//* INPUT DATA SET - OPTION CARD                                        00010700
//*                                                                     00010800
//EPSOPTN   DD DDNAME=OPTIONS,                                          00010900
//             DCB=BLKSIZE=80                                           00011000
//*                                                                     00011100
//* INPUT DATA SET - SORTED NEDS EMISSION FACTOR FILE TRANSACTIONS      00011200
```

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Figure 4.4.2-a - continued. Cataloged Procedure EPEME20

```
//*                                                                     00011300
//EPSINPT   DD DSNAME=&&SORT01,                                         00011400
//             DISP=(SHR,PASS)                                          00011500
//*                                                                     00011600
//* OUTPUT DATA SET - EIS/PS EMISSION FACTOR FILE TRANSACTIONS          00011700
//*                                                                     00011800
//EPSOUTP   DD DSNAME=&&TRANS1,                                         00011900
//             UNIT=&TEMP,                                              00012000
//             DISP=(NEW,PASS,DELETE),                                  00012100
//             SPACE=(TRK,(&WORKSPC),RLSE)                              00012200
//*                                                                     00012300
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00012400
//*                                                                     00012500
//EPSDIAG   DD SYSOUT=&OUT                                              00012600
//*                                                                     00012700
//* OUTPUT DATA SET - EMISSION FACTOR TRANSACTIONS LISTING              00012800
//*                                                                     00012900
//EPSTRNL   DD SYSOUT=&OUT                                              00013000
//*                                                                     00013100
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00013200
//*                                                                     00013300
//SYSPRINT  DD SYSOUT=&OUT                                              00013400
//*                                                                     00013500
//SYSOUT    DD SYSOUT=&OUT                                              00013600
//*                                                                     00013700
//SYSPROUT  DD SYSOUT=&OUT                                              00013800
//*                                                                     00013900
//SYSDTERM  DD SYSOUT=&OUT                                              00014000
//*                                                                     00014100
//SYSUDUMP  DD SYSOUT=&OUT                                              00014200
//*                                                                     00014300
//*                                                                     00014400
//SORT2   EXEC PGM=&PROG3,                                              00014500
//             REGION=&REGION3,                                         00014600
//             TIME=(&TIME3)                                            00014700
//*                                                                     00014800
//* SORT EIS/PS EMISSION FACTOR FILE TRANSACTIONS INTO FILE SEQUENCE    00014900
//*                                                                     00015000
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00015100
//             VOLUME=(PRIVATE,RETAIN),                                 00015200
//             DISP=(SHR,PASS)                                          00015300
//SORTLIB   DD DSNAME=SYS1.SORTLIB,                                     00015400
//             DISP=(SHR,PASS)                                          00015500
//*                                                                     00015600
//SORTWK01  DD UNIT=&TEMP,                                              00015700
//             SPACE=(TRK,(&WORKSPC),,CONTIG)                           00015800
//*                                                                     00015900
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),                               00016000
//             SPACE=(TRK,(&WORKSPC),,CONTIG)                           00016100
//*                                                                     00016200
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                    00016300
//             SPACE=(TRK,(&WORKSPC),,CONTIG)                           00016400
//*                                                                     00016500
//* INPUT DATA SET - EMISSION FACTOR FILE TRANSACTIONS                  00016600
//*                                                                     00016700
//EPSINPT   DD DSNAME=&&TRANS1,                                         00016800
```

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Figure 4.4.2-a - continued. Cataloged Procedure EPEME20

```
//            DISP=(SHR,PASS)                                           00016900
//*                                                                     00017000
//* OUTPUT DATA SET - SORTED EMISSION FACTOR FILE TRANSACTIONS          00017100
//*                                                                     00017200
//EPSOUTP   DD DSNAME=&&SORTD2,                                         00017300
//            UNIT=&TEMP,                                               00017400
//            DISP=(NEW,PASS,DELETE),                                   00017500
//            SPACE=(TRK,(&WORKSPC),RLSE)                               00017600
//*                                                                     00017700
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00017800
//*                                                                     00017900
//EPSDIAG   DD SYSOUT=&OUT                                              00018000
//*                                                                     00018100
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00018200
//*                                                                     00018300
//SYSPRINT  DD SYSOUT=&OUT                                              00018400
//*                                                                     00018500
//SYSOUT    DD SYSOUT=&OUT                                              00018600
//*                                                                     00018700
//SYSDBOUT  DD SYSOUT=&OUT                                              00018800
//*                                                                     00018900
//SYSOTERM  DD SYSOUT=&OUT                                              00019000
//*                                                                     00019100
//SYSUDUMP  DD SYSOUT=&OUT                                              00019200
//*                                                                     00019300
//*                                                                     00019400
//UPDATE    EXEC PGM=&PROG4,                                            00019500
//            REGION=&REGION4,                                          00019600
//            TIME=(&TIME4)                                             00019700
//*                                                                     00019800
//* MAINTAIN EIS/PS EMISSION FACTOR FILE                                00019900
//*                                                                     00020000
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00020100
//            VOLUME=(PRIVATE,RETAIN),                                  00020200
//            DISP=(SHR,PASS)                                           00020300
//*                                                                     00020400
//* INPUT DATA SET - MAINTENANCE CONTROL CARD                           00020500
//*                                                                     00020600
//EPSOPTN   DD DDNAME=OPTIONS,                                          00020700
//            DCB=BLKSIZE=80                                            00020800
//*                                                                     00020900
//* INPUT DATA SET - SORTED EMISSION FACTOR FILE TRANSACTIONS           00021000
//*                                                                     00021100
//EPSTRAN   DD DSNAME=&&SORTD2,                                         00021200
//            DISP=(SHR,PASS)                                           00021300
//*                                                                     00021400
//* INPUT DATA SET - OLD EMISSION FACTOR FILE                           00021500
//*                                                                     00021600
//EPSOLEF   DD DSNAME=&PROJECT..DATA.&OLDEMF,                           00021700
//            VOLUME=(PRIVATE,RETAIN),                                  00021800
//            DISP=(SHR,PASS)                                           00021900
//*                                                                     00022000
//* INPUT DATA SET - OLD EMISSION FACTOR DESCRIPTION FILE               00022100
//*                                                                     00022200
//EPSOLDS   DD DSNAME=&PROJECT..DATA.&OLDDESC,                          00022300
//            VOLUME=(PRIVATE,RETAIN),                                  00022400
```

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Figure 4.4.2-a - continued. Cataloged Procedure EPEME20

```
//             DISP=(NEW,PASS)                                              00022500
//*                                                                         00022600
//* OUTPUT DATA SET - NEW EMISSION FACTOR FILE                              00022700
//*                                                                         00022800
//EPSNEF    DD DSNAME=&PROJECT..DATA.&NEWEMF,                               00022900
//             VOLUME=(PRIVATE,RETAIN,SER=&SERIAL1),                        00023000
//             DISP=(&DISP1),                                               00023100
//             UNIT=&UNIT1,                                                 00023200
//             SPACE=(&SPCUNT1,(&PRIMRY1,&SECNDY1),RLSE)                    00023300
//*                                                                         00023400
//* OUTPUT DATA SET - NEW EMISSION FACTOR DESCRIPTION FILE                  00023500
//*                                                                         00023600
//EPSNDS    DD DSNAME=&PROJECT..DATA.&NEWDSC,                               00023700
//             VOLUME=(PRIVATE,RETAIN,SER=&SERIAL2),                        00023800
//             DISP=(&DISP2),                                               00023900
//             UNIT=&UNIT2,                                                 00024000
//             SPACE=(&SPCUNT2,(&PRIMRY2,&SECNDY2),RLSE)                    00024100
//*                                                                         00024200
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                     00024300
//*                                                                         00024400
//EPSDIAG   DD SYSOUT=&OUT                                                  00024500
//*                                                                         00024600
//* OUTPUT DATA SET - EMISSION FACTOR FILE TRANSACTION LISTING              00024700
//*                                                                         00024800
//EPSTRNL   DD SYSOUT=&OUT                                                  00024900
//*                                                                         00025000
//* OUTPUT DATA SET - OLD EMISSION FACTOR FILE LISTING                      00025100
//*                                                                         00025200
//EPSOEFL   DD SYSOUT=&OUT                                                  00025300
//*                                                                         00025400
//* OUTPUT DATA SET - OLD EMISSION FACTOR DESCRIPTION FILE LISTING          00025500
//*                                                                         00025600
//EPSODSL   DD SYSOUT=&OUT                                                  00025700
//*                                                                         00025800
//* OUTPUT DATA SET - NEW EMISSION FACTOR FILE LISTING                      00025900
//*                                                                         00026000
//EPSNEFL   DD SYSOUT=&OUT                                                  00026100
//*                                                                         00026200
//* OUTPUT DATA SET - NEW EMISSION FACTOR DESCRIPTION FILE LISTING          00026300
//*                                                                         00026400
//EPSNDSL   DD SYSOUT=&OUT                                                  00026500
//*                                                                         00026600
//* OUTPUT DATA SETS - SYSTEM OPERATION                                     00026700
//*                                                                         00026800
//SYSPRINT  DD SYSOUT=&OUT                                                  00026900
//*                                                                         00027000
//SYSOUT    DD SYSOUT=&OUT                                                  00027100
//*                                                                         00027200
//SYSDBOUT  DD SYSOUT=&OUT                                                  00027300
//*                                                                         00027400
//SYSOTERM  DD SYSOUT=&OUT                                                  00027500
//*                                                                         00027600
//SYSUDUMP  DD SYSOUT=&OUT                                                  00027700
//*                                                                         00027800
//*                                                                         00027900
```

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Figure 4.4.2-a - continued. Cataloged Procedure EPEME20

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNR.DATA.EPNEWEMF would be the full data set name of an emission factor file)
PROG1	PSRNEEF	NEDS emission factor file transaction sort program
PROG2	PCVNEEF	NEDS to EIS/PS emission factor file transaction conversion program
PROG3	PSREFTR	Emission factor file transaction sort program
PROG4	PEMEFAC	Emission factor file edit-maintenance program
REGION1	150K	Region size allocated for execution of PSRNEEF
REGION2	100K	Region size allocated for execution of PCVNEEF
REGION3	150K	Region size allocated for execution of PSREFTR
REGION4	100K	Region size allocated for execution of PEMEFAC
TIME1	'1,0'	Time allocated for execution of PSRNEEF
TIME2	'1,0'	Time allocated for execution of PCVNEEF
TIME3	'1,0'	Time allocated for execution of PSREFTR
TIME4	'1,0'	Time allocated for execution of PEMEFAC
OLDEMFC	EPOLDEMF	Lowest-level index of old emission factor file
OLDDESC	EPOLDDSC	Lowest-level index of old emission factor description file
NEWEMFC	EPNEWEMF	Lowest-level index of new emission factor file
NEWDESC	EPNEWDSC	Lowest-level index of new emission factor description file
UNIT1	3330	Unit type to which new (or updated) emission factor file is to be written

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Figure 4.4.2-b. Substitutable Parameters for EPEME20

Parameter Name	Default Value	Description
UNIT2	3330	Unit type to which new (or updated) emission factor description file is to be written
SERIAL1	CDHSPK	Serial number of volume to which new (or updated) emission factor file is to be written
SERIAL2	CDHSPK	Serial number of volume to which new (or updated) emission factor description file is to be written
SPCUNT1	TRK	Units in which space for new (or updated) emission factor file is to be allocated
SPCUNT2	TRK	Units in which space for new (or updated) emission factor description file is to be allocated
PRIMRY1	20	Primary space allocation for new (or updated) emission factor file
PRIMRY2	20	Primary space allocation for new (or updated) emission factor description file
SECNDY1	10	Secondary space allocation for new (or updated) emission factor file
SECNDY2	10	Secondary space allocation for new (or updated) emission factor description file
TEMP	SYSDA	Unit type for temporary work spaces
WORKSPC	'20,10'	Space allocation for sort work areas
OUT	A	SYSOUT class for all print files

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Figure 4.4.2-b - continued. Substitutable Parameters for EPEME20

4.4.3 MASTER FILE EDIT-MAINTENANCE - EPEMM10

4.4.3.1 Description

The cataloged procedure EPEMM10 allows the user to edit EIS/PS transactions, insert emission factor information into those transactions, and update (or create) the EIS/PS master file. This procedure executes the master file transaction sort program, PSRMFTR (EP0070); the master file transaction edit program, PEDMSTR (EP0080); the master file internal transaction pre-insertion sort program, PSREFIN (EP0090); the master file internal transaction emission factor insertion program, PMSEFIN (EP0100); the master file internal transaction sort program, PSRINTR (EP0110); and the master file maintenance program, PFMMSTR (EP0120).

4.4.3.2 JCL Listing

See Figure 4.4.3-a for a listing of this procedure.

4.4.3.3 Cross-reference of DD Names and Files

Program Name: PSRMFTR (EP0070)

DD Name	File Description	Input/Output
EPSINPT	Unsorted transactions	Input
EPSOUTP	Sorted transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PEDMSTR (EP0080)

DD Name	File Description	Input/Output
EPSTRAN	EIS/PS master file transactions	Input
EPSOPTN	Option card	Input
EPSINTR	Edited internal transactions	Output
EPSDIAG	Diagnostic report	Output
EPSTRNL	Input transaction listing	Output
EPSINTL	Output internal transaction listing	Output

Program Name: PSREFIN (EP0090)

DD Name	File Description	Input/Output
EPSINPT	Unsorted internal transactions	Input
EPSOUTP	Sorted internal transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PMSEFIN (EP0100)

DD Name	File Description	Input/Output
EPSINPT	Sorted internal transactions	Input
EPSEMFC	Emission factor file	Input
EPSOPTN	Option card	Input
EPSOUTP	Internal transactions with insertions	Output
EPSDIAG	Diagnostic report	Output

Program Name: PSRINTR (EP0110)

DD Name	File Description	Input/Output
EPSINPT	Unsorted internal transactions	Input
EPSOUTP	Sorted internal transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PFMMSTR (EP0120)

DD Name	File Description	Input/Output
EPSINTR	Internal transactions with insertions	Input
EPSOLMF	Old EIS/PS master file	Input
EPSOPTN	Option Card	Input
EPSNWMF	New or updated EIS/PS master file	Output
EPSDIAG	Diagnostic report	Output
EPSINTL	Transaction listing	Output
EPSOLDL	Old master file listing	Output
EPSNEWL	New master file listing	Output

4.4.3.4 User-supplied JCL

To execute the cataloged procedure EPEMM10, the user must supply job accounting information, input transactions, the data set names of the old and the updated (or new) EIS/PS master files and the emission factor file, and option cards to specify any desired options. See Figure 4.4.3-b for a description of the procedure's substitutable parameters.

4.4.3.5 Sample Run Stream

The following run stream illustrates the use of EPEMM10 to create an EIS/PS master file from input transactions stored in a disk data set named 'CN.EPALMH.A087.HQ.PNT.DATA.EPTRANS'. The new master file will be named 'CN.EPALMH.A087.HQ.PNT.DATA.EPMASTR1'. The emission factor file name is 'CN.EPALMH.A087.HQ.PNT.DATA.EPEMFL1'. No LIST or FLAGW options are specified for PEDMSTR (EP0080) or PFMMSTR (EP0120); an option year of 80 is used in both programs. The options specified for PMSEFIN (EP0100) are NOFLAGW and insertions for sulfur, ash, and emission factor data.

```
// EXEC EPEMM10,
//      NEWMSTR=EPMASTR1,
//      EMFCFIL=EPEMFL1
//SORT1.INPUT DD DSN=CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPTRANS,
//      DISP=OLD
//EDIT.OPTIONS DD *
80
//INSERT.OPTIONS DD *
NOFLAGW SUL I  ASH I  EMISSION I
//UPDATE.EPSOLMF DD DUMMY
//UPDATE.OPTIONS DD *
80
/*
```

```
//* EPAL80/A087 HEDGEPETH, LLOYD 4. (919) 541-5491                       00000100
//*                                                                      00000200
//*   PROCEDURE NAME: EPEMM10                                            00000300
//*   REVISION LEVEL: 1-00                                               00000400
//*   LAST UPDATE #: P-1                                                 00000500
//*   DATE INCORPORATED: FEBRUARY 1, 1980                                00000600
//*                                                                      00000700
//*   THIS PROCEDURE ALLOWS THE USER TO UPDATE THE EIS/PS MASTER         00000800
//*   FILE USING EIS/PS MASTER FILE TRANSACTIONS                         00000900
//*                                                                      00001000
//*                                                                      00001100
//EPEMM10 PROC PROJECT='CN.EPAL80.A087.CDHS.HR.PNT',                     00001200
//             PROG1=PSRMETR,                                            00001300
//             PROG2=PEOMSTR,                                            00001400
//             PROG3=PSREFTN,                                            00001500
//             PROG4=PM3EFIN,                                            00001600
//             PROG5=PSRTNTR,                                            00001700
//             PROG6=PEMMSTR,                                            00001800
//             REGION1=150K,                                             00001900
//             REGION2=100K,                                             00002000
//             REGION3=150K,                                             00002100
//             REGION4=100K,                                             00002200
//             REGION5=150K,                                             00002300
//             REGION6=150K,                                             00002400
//             TIME1='1,0',                                              00002500
//             TIME2='1,0',                                              00002600
//             TIME3='1,0',                                              00002700
//             TIME4='1,0',                                              00002800
//             TIME5='1,0',                                              00002900
//             TIME6='1,0',                                              00003000
//             EMECFIL=EPEMEFIL,                                         00003100
//             OLDMSTR=EPOLDMST,                                         00003200
//             NEWMSTR=EPNEWMST,                                         00003300
//             UNIT=3330,                                                00003400
//             SERIAL=CDHSPK,                                            00003500
//             DISP='NEW,CATLG,DELETE',                                  00003600
//             SPCUNIT=TRK,                                              00003700
//             PRIMARY=20,                                               00003800
//             SECNDRY=10,                                               00003900
//             TEMP=SYSDA,                                               00004000
//             WORKSPC='20,10',                                          00004100
//             OUT=A                                                     00004200
//*                                                                      00004300
//SORT1   EXEC  PGM=&PROG1,                                              00004400
//             REGION=&REGION1,                                          00004500
//             TIME=(&TIME1)                                             00004600
//*                                                                      00004700
//* SORT EIS/PS MASTER FILE TRANSACTIONS INTO FILE SEQUENCE              00004800
//*                                                                      00004900
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                    00005000
//             VOLUME=(PRIVATE,,SER=&SERIAL),                            00005100
//             DISP=(SHR,PASS)                                           00005200
//SORTLIB   DD DSNAME=SYS1.SORTLIB,                                      00005300
//             DISP=(SHR,PASS)                                           00005400
//*                                                                      00005500
//SORTWK01  DD UNIT=SYSDA,                                               00005600
```

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Figure 4.4.3-a. Cataloged Procedure EPEMM10

```
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                        00005700
//*                                                                   00005800
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),                             00005900
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                        00006000
//*                                                                   00006100
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                  00006200
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                        00006300
//*                                                                   00006400
//* INPUT DATA SET -  MASTER FILE TRANSACTIONS                        00006500
//*                                                                   00006600
//EPSINPT   DD DDNAME=INPUT,                                          00006700
//              DCB=BLKSIZE=80                                        00006800
//*                                                                   00006900
//* OUTPUT DATA SET - SORTED MASTER FILE TRANSACTIONS                 00007000
//*                                                                   00007100
//EPSOUTP   DD DSNAME=&&SORTD1,                                       00007200
//              UNIT=&TEMP,                                           00007300
//              DISP=(NEW,PASS,DELETE),                               00007400
//              SPACE=(TRK,(&WORKSPC),RLSE)                           00007500
//*                                                                   00007600
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                               00007700
//*                                                                   00007800
//EPSDIAG   DD SYSOUT=&OUT                                            00007900
//*                                                                   00008000
//* OUTPUT DATA SETS - SYSTEM OPERATION                               00008100
//*                                                                   00008200
//SYSPRINT  DD SYSOUT=&OUT                                            00008300
//*                                                                   00008400
//SYSOUT    DD SYSOUT=&OUT                                            00008500
//*                                                                   00008600
//SYSDBOUT  DD SYSOUT=&OUT                                            00008700
//*                                                                   00008800
//SYSUTERM  DD SYSOUT=&OUT                                            00008900
//*                                                                   00009000
//SYSUDUMP  DD SYSOUT=&OUT                                            00009100
//*                                                                   00009200
//*                                                                   00009300
//EDIT     EXEC PGM=&PROG2,                                           00009400
//              REGION=&REGION2,                                      00009500
//              TIME=(&TIME2)                                         00009600
//*                                                                   00009700
//* EDIT EIS/PS MASTER FILE TRANSACTIONS                              00009800
//*                                                                   00009900
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                 00010000
//              VOLUME=(PRIVATE,RETAIN),                              00010100
//              DISP=(SHR,PASS)                                       00010200
//*                                                                   00010300
//* INPUT DATA SET - SORTED MASTER FILE TRANSACTIONS                  00010400
//*                                                                   00010500
//EPSTRAN   DD DSNAME=&&SORTD1,                                       00010600
//              DISP=(SHR,PASS)                                       00010700
//*                                                                   00010800
//* INPUT DATA SET - OPTION CARD                                      00010900
//*                                                                   00011000
//EPSOPIN   DD DDNAME=OPTIONS,                                        00011100
//              DCB=BLKSIZE=80                                        00011200
```

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Figure 4.4.3-a - continued. Cataloged Procedure EPEMM10

```
//*
//* OUTPUT DATA SET - EDITED MASTER FILE INTERNAL TRANSACTIONS
//*
//EPSINTR    DD DSNAME=&&INTRNL,
//              UNIT=&TEMP,
//              DISP=(NEW,PASS,DELETE),
//              SPACE=(TRK,(&WORKSPC),RLSE)
//*
//* OUTPUT DATA SET - DIAGNOSTIC REPORT
//*
//EPSDIAG    DD SYSOUT=&OUT
//*
//* OUTPUT DATA SET -  MASTER FILE TRANSACTION LISTING
//*
//EPSTRNL    DD SYSOUT=&OUT
//*
//* OUTPUT DATA SET -  MASTER FILE INTERNAL TRANSACTION LISTING
//*
//EPSINTL    DD SYSOUT=&OUT
//*
//* OUTPUT DATA SETS - SYSTEM OPERATION
//*
//SYSPRINT   DD SYSOUT=&OUT
//*
//SYSOUT     DD SYSOUT=&OUT
//*
//SYSDBOUT   DD SYSOUT=&OUT
//*
//SYSOTERS   DD SYSOUT=&OUT
//*
//SYSUDUMP   DD SYSOUT=&OUT
//*
//*
//SORT2    EXEC PGM=&PROG3,
//              REGION=&REGION3,
//              TIME=(&TIME3)
//*
//* SORT EIS/PS MASTER FILE INTERNAL TRANSACTIONS INTO ACC SEQUENCE
//*
//STEPLIB    DD DSNAME=&PROJECT..LOAD,
//              VOLUME=(PRIVATE,RETAIN),
//              DISP=(SHR,PASS)
//SORTLIB    DD DSNAME=SYS1.SORTLIB,
//              DISP=(SHR,PASS)
//*
//SORTWK01   DD UNIT=&TEMP,
//              SPACE=(TRK,(&WORKSPC),,CONTIG)
//*
//SORTWK02   DD UNIT=(&TEMP,SEP=SORTWK01),
//              SPACE=(TRK,(&WORKSPC),,CONTIG)
//*
//SORTWK03   DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),
//              SPACE=(TRK,(&WORKSPC),,CONTIG)
//*
//* INPUT DATA SET - MASTER FILE INTERNAL TRANSACTIONS
//*
```

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Figure 4.4.3-a - continued. Cataloged Procedure EPEMM10

```
//EPSINPT    DD DSNAME=&&INTRN1,                                        00016900
//               DISP=(SHR,PASS)                                        00017000
//*                                                                     00017100
//* OUTPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS          00017200
//*                                                                     00017300
//EPSOUTP    DD DSNAME=&&SORTD2,                                        00017400
//               UNIT=&TEMP,                                            00017500
//               DISP=(NEW,PASS,DELETE),                                00017600
//               SPACE=(TRK,(&WORKSPC),RLSE)                            00017700
//*                                                                     00017800
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00017900
//*                                                                     00018000
//EPSDIAG    DD SYSOUT=&OUT                                             00018100
//*                                                                     00018200
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00018300
//*                                                                     00018400
//SYSPRINT  DD SYSOUT=&OUT                                              00018500
//*                                                                     00018600
//SYSOUT     DD SYSOUT=&OUT                                             00018700
//*                                                                     00018800
//SYSDBOUT  DD SYSOUT=&OUT                                              00018900
//*                                                                     00019000
//SYSUTERM  DD SYSOUT=&OUT                                              00019100
//*                                                                     00019200
//SYSUDUMP  DD SYSOUT=&OUT                                              00019300
//*                                                                     00019400
//*                                                                     00019500
//INSERT   EXEC PGM=&PROG4,                                             00019600
//               REGION=&REGION4,                                       00019700
//               TIME=(&TIME4)                                          00019800
//*                                                                     00019900
//* INSERT EMISSION FACTORS                                             00020000
//*                                                                     00020100
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                                  00020200
//               VOLUME=(PRIVATE,RETAIN),                               00020300
//               DISP=(SHR,PASS)                                        00020400
//*                                                                     00020500
//* INPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS           00020600
//*                                                                     00020700
//EPSINPT    DD DSNAME=&&SORTD2,                                        00020800
//               DISP=(SHR,PASS)                                        00020900
//*                                                                     00021000
//* INPUT DATA SET - OPTION CARD                                        00021100
//*                                                                     00021200
//EPSOPTN    DD DDNAME=OPTIONS,                                         00021300
//               DCB=BLKSIZE=80                                         00021400
//*                                                                     00021500
//* INPUT DATA SET - EIS/PS EMISSION FACTOR FILE                        00021600
//*                                                                     00021700
//EPSEMFC    DD DSNAME=&PROJECT..DATA.SEMFCFIL,                         00021800
//               VOLUME=(PRIVATE,RETAIN),                               00021900
//               DISP=(SHR,PASS)                                        00022000
//*                                                                     00022100
//* OUTPUT DATA SET - INTERNAL TRANSACTIONS WITH EMISSION FACTORS       00022200
//*                                                                     00022300
//EPSOUTP    DD DSNAME=&&SORTD3,                                        00022400
```

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Figure 4.4.3-a - continued. Cataloged Procedure EPEMM10

```
//               UNIT=&TEMP,                                           00022500
//               DISP=(NEW,PASS,DELETE),                               00022600
//               SPACE=(TRK,(&WORKSPC),RLSE)                           00022700
//*                                                                    00022800
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                00022900
//*                                                                    00023000
//EPSDIAG    DD SYSOUT=&OUT                                            00023100
//*                                                                    00023200
//* OUTPUT DATA SETS - SYSTEM OPERATION                                00023300
//*                                                                    00023400
//SYSPRINT   DD SYSOUT=&OUT                                            00023500
//*                                                                    00023600
//SYSOUT     DD SYSOUT=&OUT                                            00023700
//*                                                                    00023800
//SYSDBOUT   DD SYSOUT=&OUT                                            00023900
//*                                                                    00024000
//SYSDTERM   DD SYSOUT=&OUT                                            00024100
//*                                                                    00024200
//SYSUDUMP   DD SYSOUT=&OUT                                            00024300
//*                                                                    00024400
//*                                                                    00024500
//SORT3    EXEC  PGM=&PROG5,                                           00024600
//               REGION=&REGION5,                                      00024700
//               TIME=(&TIME5)                                         00024800
//*                                                                    00024900
//* SORT EIS/PS MASTER FILE INTERNAL TRANSACTIONS INTO FILE SEQUENCE   00025000
//*                                                                    00025100
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                                 00025200
//               VOLUME=(PRIVATE,RETAIN),                              00025300
//               DISP=(SHR,PASS)                                       00025400
//SORTLIB    DD DSNAME=SYS1.SORTLIB,                                   00025500
//               DISP=(SHR,PASS)                                       00025600
//*                                                                    00025700
//SORTWK01   DD UNIT=&TEMP,                                            00025800
//               SPACE=(TRK,(&WORKSPC),,CONTIG)                        00025900
//*                                                                    00026000
//SORTWK02   DD UNIT=(&TEMP,SEP=SORTWK01),                             00026100
//               SPACE=(TRK,(&WORKSPC),,CONTIG)                        00026200
//*                                                                    00026300
//SORTWK03   DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                  00026400
//               SPACE=(TRK,(&WORKSPC),,CONTIG)                        00026500
//*                                                                    00026600
//* INPUT DATA SET - MASTER FILE INTERNAL TRANSACTIONS                 00026700
//*                                                                    00026800
//EPSINPT    DD DSNAME=&&TEMP02,                                       00026900
//               DISP=(SHR,PASS)                                       00027000
//*                                                                    00027100
//* OUTPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS         00027200
//*                                                                    00027300
//EPSOUTP    DD UNIT=&TEMP,                                            00027400
//               DISP=(NEW,PASS,DELETE),                               00027500
//               SPACE=(TRK,(&WORKSPC),RLSE),                          00027600
//               DSNAME=&&SORTIPS                                      00027700
//*                                                                    00027800
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                00027900
//*                                                                    00028000
```

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Figure 4.4.3-a - continued. Cataloged Procedure EPEMM10

```
//EPSDIAG    DD SYSOUT=&OUT                                         00028100
//*                                                                 00028200
//* OUTPUT DATA SETS - SYSTEM OPERATION                             00028300
//*                                                                 00028400
//SYSPRINT   DD SYSOUT=&OUT                                         00028500
//*                                                                 00028600
//SYSOUT     DD SYSOUT=&OUT                                         00028700
//*                                                                 00028800
//SYSDBOUT   DD SYSOUT=&OUT                                         00028900
//*                                                                 00029000
//SYSDTERM   DD SYSOUT=&OUT                                         00029100
//*                                                                 00029200
//SYSUDUMP   DD SYSOUT=&OUT                                         00029300
//*                                                                 00029400
//*                                                                 00029500
//UPDATE   EXEC PGM=&PROG6,                                         00029600
//              REGION=&REGION6,                                    00029700
//              TIME=(&TIME6)                                       00029800
//*                                                                 00029900
//* MAINTAIN EIS/PS MASTER FILE                                     00030000
//*                                                                 00030100
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                              00030200
//              VOLUME=(PRIVATE,RETAIN),                            00030300
//              DISP=(SHR,PASS)                                     00030400
//*                                                                 00030500
//* INPUT DATA SET - OPTION CARD                                    00030600
//*                                                                 00030700
//EPSOPTN    DD DDNAME=OPTIONS,                                     00030800
//              DCB=BLKSIZE=80                                      00030900
//*                                                                 00031000
//* INPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS       00031100
//*                                                                 00031200
//EPSINTR    DD DSNAME=&&SORTDS,                                    00031300
//              DISP=(SHR,PASS)                                     00031400
//*                                                                 00031500
//* INPUT DATA SET - OLD MASTER FILE                                00031600
//*                                                                 00031700
//EPSOLMF    DD DSNAME=&PROJECT..DATA.&OLDMSTR,                     00031800
//              VOLUME=(PRIVATE,RETAIN),                            00031900
//              DISP=(SHR,PASS)                                     00032000
//*                                                                 00032100
//* OUTPUT DATA SET - NEW MASTER FILE                               00032200
//*                                                                 00032300
//EPSNWMF    DD DSNAME=&PROJECT..DATA.&NEWMSTR,                     00032400
//              UNIT=&UNIT,                                         00032500
//              VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                00032600
//              DISP=(&DISP),                                       00032700
//              SPACE=(&SPCUNIT,(&PRIMARY,&SECONDRY),RLSE)          00032800
//*                                                                 00032900
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                             00033000
//*                                                                 00033100
//EPSDIAG    DD SYSOUT=&OUT                                         00033200
//*                                                                 00033300
//* OUTPUT DATA SET - MASTER FILE INTERNAL TRANSACTION LISTING      00033400
//*                                                                 00033500
//EPSINTL    DD SYSOUT=&OUT                                         00033600
```

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Figure 4.4.3-a - continued. Cataloged Procedure EPEMM10

```
//*                                                                     00053700
//* OUTPUT DATA SET - OLD MASTER LISTING                                00053800
//*                                                                     00053900
//EPSOLDL    DD SYSOUT=&OUT                                             00054000
//*                                                                     00054100
//* OUTPUT DATA SET - NEW MASTER LISTING                                00054200
//*                                                                     00054300
//EPSNEWL    DD SYSOUT=&OUT                                             00054400
//*                                                                     00054500
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00054600
//*                                                                     00054700
//SYSPRINT  DD SYSOUT=&OUT                                              00054800
//*                                                                     00054900
//SYSOUT     DD SYSOUT=&OUT                                             00055000
//*                                                                     00055100
//SYSDBOUT  DD SYSOUT=&OUT                                              00055200
//*                                                                     00055300
//SYSUTERM  DD SYSOUT=&OUT                                              00055400
//*                                                                     00055500
//SYSUDUMP  DD SYSOUT=&OUT                                              00055600
//*                                                                     00055700
```

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Figure 4.4.3-a - continued. Cataloged Procedure EPEMM10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087.CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPNEWMST would be the full data set name of an EIS/PS master file)
PROG1	PSRMFTR	Master file transaction sort program
PROG2	PEDMSTR	Master file transaction edit program
PROG3	PSREFIN	Master file internal transaction pre-insertion sort program
PROG4	PMSEFIN	Master file internal transaction emission factor insertion program
PROG5	PSRINTR	Master file internal transaction sort program
PROG6	PFMMSTR	Master file maintenance program
REGION1	150K	Region size allocated for execution of PSRMFTR
REGION2	100K	Region size allocated for execution of PEDMSTR
REGION3	150K	Region size allocated for execution of PSREFIN
REGION4	100K	Region size allocated for execution of PMSEFIN
REGION5	150K	Region size allocated for execution of PSRINTR
REGION6	150K	Region size allocated for execution of PFMMSTR
TIME1	'1,0'	Time allocated for execution of PSRMFTR
TIME2	'1,0'	Time allocated for execution of PEDMSTR
TIME3	'1,0'	Time allocated for execution of PSREFIN
TIME4	'1,0'	Time allocated for execution of PMSEFIN
TIME5	'1,0'	Time allocated for execution of PSRINTR
TIME6	'1,0'	Time allocated for execution of PFMMSTR
OLDMSTR	EPOLDMST	Lowest-level index of old master file

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Figure 4.4.3-b. Substitutable Parameters for EPEMM10

Parameter Name	Default Value	Description
NEWMSTR	EPNEWMST	Lowest-level index of new (or updated) master file
EMFCFIL	EPEMFFIL	Lowest-level index of emission factor file
UNIT	3330	Unit type to which new (or updated) master file is to be written
SERIAL	CDHSPK	Serial number of volume to which new (or updated) master file is to be written
DISP	'NEW,CATLG, DELETE'	Disposition of new (or updated) master file
SPCUNIT	TRK	Units in which space for new (or updated) master file is to be allocated
PRIMARY	20	Primary space allocation for new (or updated) master file
SECNDRY	10	Secondary space allocation for new (or updated) master file
TEMP	SYSDA	Unit type for temporary work space
WORKSPC	'20,10'	Space allocation for sort work areas
OUT	A	SYSOUT class for all print files

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Figure 4.4.3-b - continued. Substitutable Parameters for EPEMM10

4.4.4 MASTER FILE MAINTENANCE FROM NEDS TRANSACTIONS - EPFMM20

4.4.4.1 Description

The cataloged procedure EPFMM20 allows the user to edit and convert NEDS transactions, insert emission factor information into the converted internal transactions, and update (or create) the EIS/PS master file. This procedure executes the NEDS transaction sort program, PSRNETR (EP0050); the NEDS to EIS/PS master file transaction conversion-edit program, PCENETR (EP0060); the master file internal transaction pre-insertion sort program, PSREFIN (EP0090); the master file internal transaction emission factor insertion program, PMSEFIN (EP0100); the master file internal transaction sort program, PSRINTR (EP0110); and the master file maintenance program, PFMMSTR (EP0120).

4.4.4.2 JCL Listing

See Figure 4.4.4-a for a listing of this procedure.

4.4.4.3 Cross-reference of DD Names and Files

Program Name: PSRNETR (EP0050)

DD Name	File Description	Input/Output
EPSINPT	Unsorted NEDS transactions	Input
EPSOUTP	Sorted NEDS transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PCENETR (EP0060)

DD Name	File Description	Input/Output
EPSTRAN	NEDS transactions	Input
EPSOPTN	Option card	Input
EPSINTR	EIS/PS internal transactions	Output
EPSDIAG	Diagnostic report	Output
EPSTRNL	NEDS transaction listing	Output
EPSINTL	Internal transaction listing	Output

Program Name: PSREFIN (EP0090)

DD Name	File Description	Input/Output
EPSINPT	Unsorted internal transactions	Input
EPSOUTP	Sorted internal transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work files	Internal

Program Name: PMSEFIN (EP0100)

DD Name	File Description	Input/Output
EPSINPT	Sorted internal transactions	Input
EPSEMFC	Emission factor file	Input
EPSOPTN	Option card	Input
EPSOUTP	Internal transactions with insertions	Output
EPSDIAG	Diagnostic report	Output

Program Name: PSRINTR (EP0110)

DD Name	File Description	Input/Output
EPSINPT	Unsorted internal transactions	Input
EPSOUTP	Sorted internal transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PFMMSTR (EP0120)

DD Name	File Description	Input/Output
EPSINTR	Internal transactions with insertions	Input
EPSOLMF	Old EIS/PS master file	Input
EPSOPTN	Option card	Input
EPSNWMF	New or updated EIS/PS master file	Output
EPSDIAG	Diagnostic report	Output
EPSINTL	Transaction listing	Output
EPSOLDL	Old master file listing	Output
EPSNEWL	New master file listing	Output

4.4.4.4 User-supplied JCL

To execute the cataloged procedure ECFMM20, the user must supply job accounting information, input transactions, the data set names of the old and the new (or updated) EIS/PS master file and the emission factor file, and option cards to specify any desired options. See Figure 4.4.4-b for a description of the procedure's substitutable parameters.

4.4.4.5 Sample Run Stream

The following run stream illustrates the use of EPFMM20 to create an EIS/PS master file from input transactions stored in a disk data set named 'CN.EPALMH.A087.HQ.PNT.DATA.NEDTRAN'. The new master file will be named 'CN.EPALMH.A087.HQ.PNT.DATA.EPMASTR1'. The emission factor file name is 'CN.EPALMH.A087.HQ.PNT.DATA.EPEMFL1'. No LIST or FLAGW options are specified for PCENETR (EP0060) or PFMMSTR (EP0120); an option year of 80 is used in both programs. The options specified in PMSEFIN (EP0100) are NOFLAGW and insertions for sulfur, ash, and emission factor data.

```
// EXEC EPFMM20,
//      NEWMSTR=EPMASTR1,
//      EMFCFIL=EPEMFL1
//SORT1.INPUT DD DSN=CN.EPALMH.A087.CDHS.HQ.PNT.DATA.NEDTRAN,
//      DISP=OLD
//CONVERT.OPTIONS DD *
80
//INSERT.OPTIONS DD *
NOFLAGW SUL I  ASH I  EMISSION I
//UPDATE.EPSOLDMF DD DUMMY
//UPDATE.OPTIONS DD *
80
/*
```

```
//* EPALMO/A087 HEDGEPETH, LLOYD M. (919) 541-5491                       00000100
//*                                                                      00000200
//*   PROCEDURE NAME: EPFMM20                                            00000300
//*   REVISION LEVEL: 1-00                                               00000400
//*   LAST UPDATE #: P-1                                                 00000500
//*   DATE INCORPORATED: FEBRUARY 1, 1980                                00000600
//*                                                                      00000700
//*   THIS PROCEDURE ALLOWS THE USER TO UPDATE THE EIS/PS MASTER         00000800
//*   FILE USING NEDS MASTER FILE TRANSACTIONS                           00000900
//*                                                                      00001000
//*                                                                      00001100
//EPFMM20 PROC PROJECT='CH.EPALMO.A087.CDHS.MO.PNI',                     00001200
//             PROG1=PSRMLTR,                                            00001300
//             PROG2=PLIMEIR,                                            00001400
//             PROG3=PSREFIN,                                            00001500
//             PROG4=PASEFIN,                                            00001600
//             PROG5=PSRTOTR,                                            00001700
//             PROG6=PEMMSTP,                                            00001800
//             REGION1=150K,                                             00001900
//             REGION2=100K,                                             00002000
//             REGION3=150K,                                             00002100
//             REGION4=100K,                                             00002200
//             REGION5=150K,                                             00002300
//             REGION6=150K,                                             00002400
//             TIME1='1,0',                                              00002500
//             TIME2='1,0',                                              00002600
//             TIME3='1,0',                                              00002700
//             TIME4='1,0',                                              00002800
//             TIME5='1,0',                                              00002900
//             TIME6='1,0',                                              00003000
//             EMFCFIL=EPEMFFIL,                                         00003100
//             OLDMSTR=EPOLDMST,                                         00003200
//             NEWMSTR=EPNEWMST,                                         00003300
//             UNIT=3330,                                                00003400
//             SERIAL=CDHSPK,                                            00003500
//             DISP='NEW,CATLG,DELETE',                                  00003600
//             SPCUNIT=TRK,                                              00003700
//             PRIMARY=20,                                               00003800
//             SECNDRY=10,                                               00003900
//             TEMP=SYSDA,                                               00004000
//             WORKSPC='20,10',                                          00004100
//             OUT=A                                                     00004200
//*                                                                      00004300
//SORT1    EXEC PGM=&PROG1,                                              00004400
//             REGION=&REGION1,                                          00004500
//             TIME=(&TIME1)                                             00004600
//*                                                                      00004700
//* SORT NEDS MASTER FILE TRANSACTIONS INTO FILE SEQUENCE                00004800
//*                                                                      00004900
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                    00005000
//             VOLUME=(PRIVATE,RETAIN),                                  00005100
//             DISP=(SHR,PASS)                                           00005200
//SORTLIB   DD DSNAME=SYS1.SORTLIB,                                      00005300
//             DISP=(SHR,PASS)                                           00005400
//*                                                                      00005500
//SORTWK01  DD UNIT=&TEMP,                                               00005600
```

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Figure 4.4.4-a. Cataloged Procedure EPFMM20

```
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                          00005700
//*                                                                     00005800
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),                               00005900
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                          00006000
//*                                                                     00006100
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                    00006200
//              SPACE=(TRK,(&WORKSPC),,CONTIG)                          00006300
//*                                                                     00006400
//* INPUT DATA SET - MEDS MASTER FILE TRANSACTIONS                      00006500
//*                                                                     00006600
//EPSINPT   DD DDNAME=INPUT,                                            00006700
//              DCB=BLKSIZE=80                                          00006800
//*                                                                     00006900
//* OUTPUT DATA SET - SORTED MEDS MASTER FILE TRANSACTIONS              00007000
//*                                                                     00007100
//EPSOUTP   DD DSNAME=&&SORT01,                                         00007200
//              UNIT=&TEMP,                                             00007300
//              DISP=(NEW,PASS,DELETE),                                 00007400
//              SPACE=(TRK,(&WORKSPC),RLSE)                             00007500
//*                                                                     00007600
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00007700
//*                                                                     00007800
//EPSDIAG   DD SYSOUT=&OUT                                              00007900
//*                                                                     00008000
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00008100
//*                                                                     00008200
//SYSPRINT  DD SYSOUT=&OUT                                              00008300
//*                                                                     00008400
//SYSOUT    DD SYSOUT=&OUT                                              00008500
//*                                                                     00008600
//SYSDBOUT  DD SYSOUT=&OUT                                              00008700
//*                                                                     00008800
//SYSDTERM  DD SYSOUT=&OUT                                              00008900
//*                                                                     00009000
//SYSUDUMP  DD SYSOUT=&OUT                                              00009100
//*                                                                     00009200
//*                                                                     00009300
//CONVERT  EXEC PGM=&PROG2,                                             00009400
//              REGION=&REGION2,                                        00009500
//              TIME=(&TIME2)                                           00009600
//*                                                                     00009700
//* CONVERT AND EDIT TRANSACTIONS                                       00009800
//*                                                                     00009900
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00010000
//              VOLUME=(PRIVATE,RETAIN),                                00010100
//              DISP=(SHR,PASS)                                         00010200
//*                                                                     00010300
//* INPUT DATA SET - SORTED MEDS MASTER FILE TRANSACTIONS               00010400
//*                                                                     00010500
//EPSTRAN   DD DSNAME=&&SORT01,                                         00010600
//              DISP=(SHR,PASS)                                         00010700
//*                                                                     00010800
//* INPUT DATA SET - OPTION CARD                                        00010900
//*                                                                     00011000
//EPSOPTN   DD DDNAME=OPTIONS,                                          00011100
//              DCB=BLKSIZE=80                                          00011200
```

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Figure 4.4.4-a - continued. Cataloged Procedure EPFMM20

```
//*                                                                     00011300
//* OUTPUT DATA SET - EDITED EIS/PS MASTER FILE INTERNAL TRANSACTIONS   00011400
//*                                                                     00011500
//EPSINIP   DD DSNAME=&&INTNIP,                                         00011600
//             UNIT=&TEMP,                                              00011700
//             DISP=(NEW,PASS,DELETE),                                  00011800
//             SPACE=(TRK,(&WORKSPC),RLSE)                              00011900
//*                                                                     00012000
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00012100
//*                                                                     00012200
//EPSDIAG   DD SYSOUT=&OUT                                              00012300
//*                                                                     00012400
//* OUTPUT DATA SET - HEDS MASTER FILE TRANSACTION LISTING              00012500
//*                                                                     00012600
//EPSIRHD   DD SYSOUT=&OUT                                              00012700
//*                                                                     00012800
//* OUTPUT DATA SET - EIS/PS MASTER FILE INTERNAL TRANSACTION LISTING   00012900
//*                                                                     00013000
//EPSINTL   DD SYSOUT=&OUT                                              00013100
//*                                                                     00013200
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00013300
//*                                                                     00013400
//SYSPRINT  DD SYSOUT=&OUT                                              00013500
//*                                                                     00013600
//SYSOUT    DD SYSOUT=&OUT                                              00013700
//*                                                                     00013800
//SYSDBOUT  DD SYSOUT=&OUT                                              00013900
//*                                                                     00014000
//SYSUTERM  DD SYSOUT=&OUT                                              00014100
//*                                                                     00014200
//SYSUDUMP  DD SYSOUT=&OUT                                              00014300
//*                                                                     00014400
//*                                                                     00014500
//SORT2    EXEC  PGM=&PROG3,                                            00014600
//             REGION=&REGION3,                                         00014700
//             TIME=(&TIME3)                                            00014800
//*                                                                     00014900
//* SORT EIS/PS MASTER FILE INTERNAL TRANSACTIONS INTO FILE SEQUENCE    00015000
//*                                                                     00015100
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00015200
//             VOLUME=(PRIVATE,RETAIN),                                 00015300
//             DISP=(SHR,PASS)                                          00015400
//SORTLIB   DD DSNAME=SYS1.SORTLIB,                                     00015500
//             DISP=(SHR,PASS)                                          00015600
//*                                                                     00015700
//SORTWK01  DD UNIT=&TEMP,                                              00015800
//             SPACE=(TRK,(&WORKSPC),,CONTIG)                           00015900
//*                                                                     00016000
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),                               00016100
//             SPACE=(TRK,(&WORKSPC),,CONTIG)                           00016200
//*                                                                     00016300
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                    00016400
//             SPACE=(TRK,(&WORKSPC),,CONTIG)                           00016500
//*                                                                     00016600
//* INPUT DATA SET - MASTER FILE INTERNAL TRANSACTIONS                  00016700
//*                                                                     00016800
```

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Figure 4.4.4-a - continued. Cataloged Procedure EPFMM20

```
//EPSINPT   DD DSNAME=&&INTRN1,                                       00016900
//             DISP=(SHR,PASS)                                        00017000
//*                                                                   00017100
//* OUTPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS        00017200
//*                                                                   00017300
//EPSOUTP   DD DSNAME=&&SORTD2,                                       00017400
//             UNIT=&TEMP,                                            00017500
//             DISP=(NEW,PASS,DELETE),                                00017600
//             SPACE=(TRK,(&WORKSPC),RLSE)                            00017700
//*                                                                   00017800
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                               00017900
//*                                                                   00018000
//EPSDIAG   DD SYSOUT=&OUT                                            00018100
//*                                                                   00018200
//* OUTPUT DATA SETS - SYSTEM OPERATION                               00018300
//*                                                                   00018400
//SYSPRINT  DD SYSOUT=&OUT                                            00018500
//*                                                                   00018600
//SYSOUT    DD SYSOUT=&OUT                                            00018700
//*                                                                   00018800
//SYSDBOUT  DD SYSOUT=&OUT                                            00018900
//*                                                                   00019000
//SYSOTERM  DD SYSOUT=&OUT                                            00019100
//*                                                                   00019200
//SYSUDUMP  DD SYSOUT=&OUT                                            00019300
//*                                                                   00019400
//*                                                                   00019500
//INSERT  EXEC PGM=&PROG4,                                            00019600
//             REGION=&REGION4,                                       00019700
//             TIME=(&TIME4)                                          00019800
//*                                                                   00019900
//* INSERT EMISSION FACTORS                                           00020000
//*                                                                   00020100
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                 00020200
//             VOLUME=(PRIVATE,RETAIN),                               00020300
//             DISP=(SHR,PASS)                                        00020400
//*                                                                   00020500
//* INPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS         00020600
//*                                                                   00020700
//EPSINPT   DD DSNAME=&&SORTD2,                                       00020800
//             DISP=(SHR,PASS)                                        00020900
//*                                                                   00021000
//* INPUT DATA SET - OPTION CARD                                      00021100
//*                                                                   00021200
//EPSOPIN   DD DSNAME=OPTIONS,                                        00021300
//             DCB=BLKSIZE=80                                         00021400
//*                                                                   00021500
//* INPUT DATA SET - EIS/PS EMISSION FACTOR FILE                      00021600
//*                                                                   00021700
//EPSEMFC   DD DSNAME=&PROJECT..DATA.SEMFCFIL,                        00021800
//             VOLUME=(PRIVATE,RETAIN),                               00021900
//             DISP=(SHR,PASS)                                        00022000
//*                                                                   00022100
//* OUTPUT DATA SET - INTERNAL TRANSACTIONS WITH EMISSION FACTORS     00022200
//*                                                                   00022300
//EPSOUTP   DD DSNAME=&&INTRN2,                                       00022400
```

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Figure 4.4.4-a - continued. Cataloged Procedure EPFMM20

```
//               UNIT=&TEMP,                                            00022500
//               DISP=(NEW,PASS,DELETE),                                00022600
//               SPACE=(TRK,(&WORKSPC),RLSE)                            00022700
//*                                                                     00022800
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00022900
//*                                                                     00023000
//EPSDIAG    DD SYSOUT=&OUT                                             00023100
//*                                                                     00023200
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00023300
//*                                                                     00023400
//SYSPRINT   DD SYSOUT=&OUT                                             00023500
//*                                                                     00023600
//SYSOUT     DD SYSOUT=&OUT                                             00023700
//*                                                                     00023800
//SYSDBOUT   DD SYSOUT=&OUT                                             00023900
//*                                                                     00024000
//SYSDTERM   DD SYSOUT=&OUT                                             00024100
//*                                                                     00024200
//SYSUDUMP   DD SYSOUT=&OUT                                             00024300
//*                                                                     00024400
//*                                                                     00024500
//SORT3    EXEC PGM=&PROGS,                                             00024600
//               REGION=&REGIONS,                                       00024700
//               TIME=(&TIMES)                                          00024800
//*                                                                     00024900
//* SORT EIS/PS MASTER FILE INTERNAL TRANSACTIONS INTO FILE SEQUENCE    00025000
//*                                                                     00025100
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                                  00025200
//               VOLUME=(PRIVATE,RETAIN),                               00025300
//               DISP=(SHR,PASS)                                        00025400
//SORTLIB    DD DSNAME=SYS1.SORTLIB,                                    00025500
//               DISP=(SHR,PASS)                                        00025600
//*                                                                     00025700
//SORTWK01   DD UNIT=&TEMP,                                             00025800
//               SPACE=(TRK,(&WORKSPC),,CONTIG)                         00025900
//*                                                                     00026000
//SORTWK02   DD UNIT=(&TEMP,SEP=SORTWK01),                              00026100
//               SPACE=(TRK,(&WORKSPC),,CONTIG)                         00026200
//*                                                                     00026300
//SORTWK03   DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                   00026400
//               SPACE=(TRK,(&WORKSPC),,CONTIG)                         00026500
//*                                                                     00026600
//* INPUT DATA SET - MASTER FILE INTERNAL TRANSACTIONS                  00026700
//*                                                                     00026800
//EPSINPT    DD DSNAME=&&INTRN2,                                        00026900
//               DISP=(SHR,PASS)                                        00027000
//*                                                                     00027100
//* OUTPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS          00027200
//*                                                                     00027300
//EPSOUTP    DD UNIT=&TEMP,                                             00027400
//               DISP=(NEW,PASS,DELETE),                                00027500
//               SPACE=(TRK,(&WORKSPC),RLSE),                           00027600
//               DSNAME=&&SORTO3                                        00027700
//*                                                                     00027800
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00027900
//*                                                                     00028000
```

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Figure 4.4.4-a - continued. Cataloged Procedure EPFMM20

```
//EPSDIAG   DD SYSOUT=&OUT                                              00028100
//*                                                                     00028200
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00028300
//*                                                                     00028400
//SYSPRINT  DD SYSOUT=&OUT                                              00028500
//*                                                                     00028600
//SYSOUT    DD SYSOUT=&OUT                                              00028700
//*                                                                     00028800
//SYSDBOUT  DD SYSOUT=&OUT                                              00028900
//*                                                                     00029000
//SYSDTERM  DD SYSOUT=&OUT                                              00029100
//*                                                                     00029200
//SYSUDUMP  DD SYSOUT=&OUT                                              00029300
//*                                                                     00029400
//*                                                                     00029500
//UPDATE   EXEC PGM=&PROGA,                                             00029600
//              REGION=&REGIONA,                                        00029700
//              TIME=(&TIMEA)                                           00029800
//*                                                                     00029900
//* MAINTAIN EIS/PS MASTER FILE                                         00030000
//*                                                                     00030100
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00030200
//              VOLUME=(PRIVATE,RETAIN),                                00030300
//              DISP=(SHR,PASS)                                         00030400
//*                                                                     00030500
//* INPUT DATA SET - OPTION CARD                                        00030600
//*                                                                     00030700
//EPSOPIN   DD DDNAME=OPTIONS,                                          00030800
//              DCB=BLKSIZE=80                                          00030900
//*                                                                     00031000
//* INPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS           00031100
//*                                                                     00031200
//EPSITIN   DD DSNAME=&&SORTIDS,                                        00031300
//              DISP=(SHR,PASS)                                         00031400
//*                                                                     00031500
//* INPUT DATA SET - OLD MASTER FILE                                    00031600
//*                                                                     00031700
//EPSOLMF   DD DSNAME=&PROJECT..DATA.&OLDMSTR,                          00031800
//              VOLUME=(PRIVATE,RETAIN),                                00031900
//              DISP=(SHR,PASS)                                         00032000
//*                                                                     00032100
//* OUTPUT DATA SET - NEW MASTER FILE                                   00032200
//*                                                                     00032300
//EPSNWMF   DD DSNAME=&PROJECT..DATA.&NEWMSTR,                          00032400
//              UNIT=&UNIT,                                             00032500
//              VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                    00032600
//              DISP=(&DISP),                                           00032700
//              SPACE=(&SPCUNIT,(&PRIMARY,&SECONDRY),RLSE)              00032800
//*                                                                     00032900
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00033000
//*                                                                     00033100
//EPSDIAG   DD SYSOUT=&OUT                                              00033200
//*                                                                     00033300
//* OUTPUT DATA SET - MASTER FILE INTERNAL TRANSACTION LISTING          00033400
//*                                                                     00033500
//EPSITLT   DD SYSOUT=&OUT                                              00033600
```

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Figure 4.4.4-a - continued. Cataloged Procedure EPFMM20

```
//*                                                          00053700
//* OUTPUT DATA SET - OLD MASTER LISTING                     00053800
//*                                                          00053900
//EPSOLDL   DD SYSOUT=&OUT                                   00054000
//*                                                          00054100
//* OUTPUT DATA SET - NEW MASTER LISTING                     00054200
//*                                                          00054300
//EPSNEWL   DD SYSOUT=&OUT                                   00054400
//*                                                          00054500
//* OUTPUT DATA SETS - SYSTEM OPERATION                      00054600
//*                                                          00054700
//SYSPRINT  DD SYSOUT=&OUT                                   00054800
//*                                                          00054900
//SYSOUT    DD SYSOUT=&OUT                                   00055000
//*                                                          00055100
//SYSDBOUT  DD SYSOUT=&OUT                                   00055200
//*                                                          00055300
//SYSDTERM  DD SYSOUT=&OUT                                   00055400
//*                                                          00055500
//SYSUDUMP  DD SYSOUT=&OUT                                   00055600
//*                                                          00055700
```

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Figure 4.4.4-a - continued. Cataloged Procedure EPFMM20

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087.CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPOLDMST would be the full data set name of a master file)
PROG1	PSRNETR	NEDS transaction sort program
PROG2	PCENETR	NEDS to EIS/PS master file transaction conversion-edit program
PROG3	PSREFIN	Master file internal transaction pre-insertion sort program
PROG4	PMSEFIN	Master file internal transaction emission factor insertion program
PROG5	PSRINTR	Master file internal transaction sort program
PROG6	PFMMSTR	Master file maintenance program
REGION1	150K	Region size allocated for execution of PSRNETR
REGION2	100K	Region size allocated for execution of PCENETR
REGION3	150K	Region size allocated for execution of PSREFIN
REGION4	100K	Region size allocated for execution of PMSEFIN
REGION5	150K	Region size allocated for execution of PSRINTR
REGION6	150K	Region size allocated for execution of PFMMSTR
TIME1	'1,0'	Time allocated for execution of PSRNETR
TIME2	'1,0'	Time allocated for execution of PCENETR
TIME3	'1,0'	Time allocated for execution of PSREFIN
TIME4	'1,0'	Time allocated for execution of PMSEFIN
TIME5	'1,0'	Time allocated for execution of PSRINTR
TIME6	'1,0'	Time allocated for execution of PFMMSTR
OLDMSTR	ECOLDMST	Lowest-level index of old master file

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Figure 4.4.4-b. Substitutable Parameters for EPFMM20

Parameter Name	Default Value	Description
NEWMSTR	EPNEWMST	Lowest-level index of new (or updated) master file
EMFCFIL	EPEMFFIL	Lowest-level index of emission factor file
UNIT	3330	Unit type to which new (or updated) master file is to be written
SERIAL	CDHSPK	Serial number of volume to which new (or updated) master file is to be written
DISP	'NEW,CATLG, DELETE'	Disposition of new (or updated) master file
SPCUNIT	TRK	Units in which space for new (or updated) master file is to be allocated
PRIMARY	20	Primary space allocation for new (or updated) master file
SECNDRY	10	Secondary space allocation for new (or updated) master file
TEMP	SYSDA	Unit type for temporary work space
WORKSPC	'20,10'	Space allocation for sort work areas
OUT	A	SYSOUT class for all print files

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Figure 4.4.4-b - continued. Substitutable Parameters for EPFMM20

4.4.5 MASTER FILE MAINTENANCE FROM EMISSION FACTOR TRANSACTIONS - EPFMM30

4.4.5.1 Description

The cataloged procedure PEFMM30 allows the user to generate internal transactions, insert emission factor information into those transactions, and update the EIS/PS master file. This procedure executes the master file emission factor transaction generator program, PMSEFGN (EP0130); the master file internal transaction pre-insertion sort program, PSREFIN (EP0090); the master file internal transaction emission factor insertion program, PMSEFIN (EP0100); the master file internal transaction sort program, PSRINTR (EP0110); and the master file maintenance program, PFMMSTR (EP0120).

4.4.5.2 JCL Listing

See Figure 4.4.5-a for a listing of this procedure.

4.4.5.3 Cross-reference of DD Names and Files

Program Name: PMSEFGN (EP0130)

DD Name	File Description	Input/Output
EPSMSTR	EIS/PS master file	Input
EPSEMFC	EIS/PS emission factor file	Input
EPSOPTN	Option card	Input
EPSOUTP	Internal transactions	Output
EPSOPTO	Option card for PMSEFIN (EP0100)	Output
EPSDIAG	Diagnostic report	Output

Program Name: PSREFIN (EP0090)

DD Name		Input/Output
EPSINPT	Unsorted internal transactions	Input
EPSOUTP	Sorted internal transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work files	Internal

Program Name: PMSEFIN (EP0100)

DD Name		Input/Output
EPSINPT	Sorted internal transactions	Input
EPSEMFC	Emission factor file	Input
EPSOPTN	Option card	Input
EPSOUTP	Internal transactions with insertions	Output
EPSDIAG	Diagnostic report	Output

Program Name: PSRINTR (EP0110)

DD Name		Input/Output
EPSINPT	Unsorted internal transactions	Input
EPSOUTP	Sorted internal transactions	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

Program Name: PFMMSTR (EP0120)

DD Name		Input/Output
EPSINTR	Internal transactions with insertions	Input
EPSOLMF	Old EIS/PS master file	Input
EPSOPTN	Option card	Input
EPSNWMF	New or update EIS/PS master file	Output
EPSDIAG	Diagnostic report	Output
EPSINTL	Transaction listing	Output
EPSOLDL	Old master file listing	Output
EPSNEWL	New master file listing	Output

4.4.5.4 User-supplied JCL

To execute the cataloged procedure ECFMM30, the user must supply job accounting information, the data set names of the old and the new (or updated) EIS/PS master file and the emission factor file, and option cards to specify any desired options. See Figure 4.4.5-b for a description of the procedure's substitutable parameters.

4.4.5.5 Sample Run Stream

The following run stream illustrates the use of EPFMM30 to update an EIS/PS master file using generated transactions containing emission factor information. The current EIS/PS master file is named 'CN.EPALMH.A087.HQ.PNT. DATA.EPMASTR1'. The new master file will be named 'CN.EPALMH.A087.HQ.PNT. DATA.EPMASTR2'. The emission factor file name is 'CN.EPALMH.A087.HQ.PNT.DATA.

EPEMF1'. No LIST or FLAGW option is specified for PFMMSTR (EP0120); an option year of 80 is used for the program. The NOFLAGW option , local origin, source 1, and a date of 80034 are specified for PMSEFGN (EP0130).

```
// EXEC EPFMM30,
//      OLDMSTR=EPMASTR1,
//      EMFCFIL=EPEMF1,
//      NEWMSTR=EPMASTR2,
//GENER.OPTIONS DD *
L1      80034   NOFLAGW
//UPDATE.OPTIONS DD *
80
/*
```

```
//* EPAL90/A087 HEDGEPETH, LLOYD A. (919) 541-5491
//*
//*    PROCEDURE NAME: EPFMM30
//*    REVISION LEVEL: 1-00
//*    LAST UPDATE #: P-1
//*    DATE INCORPORATED: FEBRUARY 1, 1980
//*
//*    THIS PROCEDURE ALLOWS THE USER TO UPDATE THE EIS/PS MASTER
//*    FILE USING GENERATED EMISSION FACTOR TRANSACTIONS
//*
//*
//EPFMM20 PROC PROJECT='EQ.EPAL90.A087.CDMS.HQ.PMI',
//             PROG1=PSEFGN,
//             PROG2=PSREFIN,
//             PROG3=PSEFFIN,
//             PROG4=PSRTOIR,
//             PROG5=PEFMSTR,
//             REGION1=100K,
//             REGION2=150K,
//             REGION3=100K,
//             REGION4=150K,
//             REGION5=150K,
//             TIME1='1,0',
//             TIME2='1,0',
//             TIME3='1,0',
//             TIME4='1,0',
//             TIME5='1,0',
//             EFCFIL=EPFMFFIL,
//             OLDMSTR=EPOLDMST,
//             NEWMSTR=EPNEWMST,
//             UNIT=3330,
//             SERIAL=COMSPK,
//             DISP='NEW,CATLG,DELETE',
//             SPCUNT1=TRK,
//             SPCUNT2=TRK,
//             PRIMARY=20,
//             SECNDRY=10,
//             TEMP=SYSDA,
//             WORKSPC='20,10',
//             OUT=A
//*
//*
//GENER    EXEC PGM=&PROG1,
//             REGION=&REGION1,
//             TIME=(&TIME1)
//*
//*  GENERATE EIS/PS INTERNAL EMISSION FACTOR TRANSACTIONS
//*
//STEPLIB    DD DSNAME=&PROJECT..LOAD,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//*
//*  INPUT DATA SET - EIS/PS EMISSION FACTOR FILE
//*
//EPSEFEC    DD DSNAME=&PROJECT..DATA.&EFCFIL,
//             VOLUME=(PRIVATE,RETAIN),
```

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Figure 4.4.5-a. Cataloged Procedure EPFMM30

```
//             DISP=(SHR,PASS)                                          00005700
//*                                                                     00005800
//*  INPUT DATA SET - EIS/PS MASTER FILE                                00005900
//*                                                                     00006000
//EPSMSTR   DD DSNAME=&PROJECT..DATA.&OLDMSTR,                          00006100
//             VOLUME=(PRIVATE,RETAIN),                                 00006200
//             DISP=(SHR,PASS)                                          00006300
//*                                                                     00006400
//*  INPUT DATA SET - OPTION CARD                                       00006500
//*                                                                     00006600
//EPSOPIN   DD DDNAME=OPTIONS,                                          00006700
//             DCB=BLKSIZE=80                                           00006800
//*                                                                     00006900
//*  OUTPUT DATA SET - EIS/PS INTERNAL EMISSION FACTOR TRANSACTIONS     00007000
//*                                                                     00007100
//EPSOUTP   DD DSNAME=&&TRANS1,                                         00007200
//             UNIT=&TEMP,                                              00007300
//             DISP=(NEW,PASS,DELETE),                                  00007400
//             SPACE=(&SPCUNIT,(&PRMRY1,&SCNDRY1),RLSE)                 00007500
//*                                                                     00007600
//*  OUTPUT DATA SET - OPTION CARD FOR PMSEFIN                          00007700
//*                                                                     00007800
//EPSOPTO   DD DSNAME=&&CARD,                                           00007900
//          DISP=(NEW,PASS,DELETE),                                     00008000
//          UNIT=&TEMP,                                                 00008100
//          SPACE=(TRK,1)                                               00008200
//*  OUTPUT DATA SET - DIAGNOSTIC REPORT                                00008300
//*                                                                     00008400
//EPSDIAG   DD SYSOUT=&OUT                                              00008500
//*                                                                     00008600
//*  OUTPUT DATA SETS - SYSTEM OPERATION                                00008700
//*                                                                     00008800
//SYSOUT    DD SYSOUT=&OUT                                              00008900
//*                                                                     00009000
//SYSPRINT  DD SYSOUT=&OUT                                              00009100
//*                                                                     00009200
//SYSDBOUT  DD SYSOUT=&OUT                                              00009300
//*                                                                     00009400
//SYSOTERM  DD SYSOUT=&OUT                                              00009500
//*                                                                     00009600
//SYSUDUMP  DD SYSOUT=&OUT                                              00009700
//*                                                                     00009800
//*                                                                     00009900
//SORT    EXEC  PGM=&PROG2,                                             00010000
//             REGION=&REGION2,                                         00010100
//             TIME=(&TIME2)                                            00010200
//*                                                                     00010300
//* SORT EIS/PS MASTER FILE INTERNAL TRANSACTIONS INTO FILE SEQUENCE    00010400
//*                                                                     00010500
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00010600
//             VOLUME=(PRIVATE,RETAIN),                                 00010700
//             DISP=(SHR,PASS)                                          00010800
//SORTLIB   DD DSNAME=SYS1.SORTLIB,                                     00010900
//             DISP=(SHR,PASS)                                          00011000
//*                                                                     00011100
//SORTWK01  DD UNIT=&TEMP,                                              00011200
```

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Figure 4.4.5-a - continued. Cataloged Procedure EPFMM30

```
//             SPACE=(&SPCUNIT2,(&WORKSPC),,CONTIG)                    00011300
//*                                                                    00011400
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),                              00011500
//             SPACE=(&SPCUNIT2,(&WORKSPC),,CONTIG)                    00011600
//*                                                                    00011700
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                   00011800
//             SPACE=(&SPCUNIT2,(&WORKSPC),,CONTIG)                    00011900
//*                                                                    00012000
//* INPUT DATA SET - MASTER FILE INTERNAL TRANSACTIONS                 00012100
//*                                                                    00012200
//EPSINPT   DD DSNAME=&&TRANS1,                                        00012300
//             DISP=(SHR,PASS)                                         00012400
//*                                                                    00012500
//* OUTPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS         00012600
//*                                                                    00012700
//EPSOUTP   DD DSNAME=&&SORTED,                                        00012800
//             UNIT=&TEMP,                                             00012900
//             DISP=(NEW,PASS,DELETE),                                 00013000
//             SPACE=(&SPCUNIT1,(&PRMARY1,&SCNDRY1),RLSE)              00013100
//*                                                                    00013200
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                00013300
//*                                                                    00013400
//EPSDIAG   DD SYSOUT=&OUT                                             00013500
//*                                                                    00013600
//* OUTPUT DATA SETS - SYSTEM OPERATION                                00013700
//*                                                                    00013800
//SYSPRINT  DD SYSOUT=&OUT                                             00013900
//*                                                                    00014000
//SYSOUT    DD SYSOUT=&OUT                                             00014100
//*                                                                    00014200
//SYSDBOUT  DD SYSOUT=&OUT                                             00014300
//*                                                                    00014400
//SYSDTERM  DD SYSOUT=&OUT                                             00014500
//*                                                                    00014600
//SYSUDUMP  DD SYSOUT=&OUT                                             00014700
//*                                                                    00014800
//*                                                                    00014900
//INSERT  EXEC PGM=&PGM04,                                             00015000
//             REGION=&REGION4,                                        00015100
//             TIME=(&TIME4)                                           00015200
//*                                                                    00015300
//* INSERT EMISSION FACTORS                                            00015400
//*                                                                    00015500
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                  00015600
//             VOLUME=(PRIVATE,RETAIN),                                00015700
//             DISP=(SHR,PASS)                                         00015800
//*                                                                    00015900
//* INPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS          00016000
//*                                                                    00016100
//EPSINPT   DD DSNAME=&&SORTED,                                        00016200
//             DISP=(SHR,PASS)                                         00016300
//*                                                                    00016400
//* INPUT DATA SET - OPTION CARD                                       00016500
//*                                                                    00016600
//EPSOPTN   DD DSNAME=&&[illegible],                                   00016700
//             DISP=(OLD,PASS)                                         00016800
```

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Figure 4.4.5-a - continued. Cataloged Procedure EPFMM30

```
//*                                                                     00016900
//* INPUT DATA SET - EIS/PS EMISSION FACTOR FILE                        00017000
//*                                                                     00017100
//EPSIEFF   DD DSNAME=&PROJECT..DATA.&EMFCFIL,                          00017200
//             VOLUME=(PRIVATE,RETAIN),                                 00017300
//             DISP=(SHR,PASS)                                          00017400
//*                                                                     00017500
//* OUTPUT DATA SET - INTERNAL TRANSACTIONS WITH EMISSION FACTORS       00017600
//*                                                                     00017700
//*                                                                     00017800
//* OUTPUT DATA SET - INTERNAL TRANSACTIONS WITH EMISSION FACTORS       00017900
//*                                                                     00018000
//EPSOUTP   DD DSNAME=&&INTRN2,                                         00018100
//             UNIT=&TEMP,                                              00018200
//             DISP=(NEW,PASS,DELETE),                                  00018300
//             SPACE=(TRK,(&NUMSPC),RLSE)                               00018400
//*                                                                     00018500
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00018600
//*                                                                     00018700
//EPSDIAG   DD SYSOUT=&OUT                                              00018800
//*                                                                     00018900
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00019000
//*                                                                     00019100
//SYSPRINT  DD SYSOUT=&OUT                                              00019200
//*                                                                     00019300
//SYSOUT    DD SYSOUT=&OUT                                              00019400
//*                                                                     00019500
//SYSDBOUT  DD SYSOUT=&OUT                                              00019600
//*                                                                     00019700
//SYSDTERM  DD SYSOUT=&OUT                                              00019800
//*                                                                     00019900
//SYSUDUMP  DD SYSOUT=&OUT                                              00020000
//*                                                                     00020100
//*                                                                     00020200
//SORT3    EXEC PGM=&PROGA,                                             00020300
//             REGION=&REGIONA,                                         00020400
//             TIME=(&TIMEA)                                            00020500
//*                                                                     00020600
//* SORT EIS/PS MASTER FILE INTERNAL TRANSACTIONS INTO FILE SEQUENCE    00020700
//*                                                                     00020800
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00020900
//             VOLUME=(PRIVATE,RETAIN),                                 00021000
//             DISP=(SHR,PASS)                                          00021100
//SORTLIB   DD DSNAME=SYS1.SORTLIB,                                     00021200
//             DISP=(SHR,PASS)                                          00021300
//*                                                                     00021400
//SORTWK01  DD UNIT=&TEMP,                                              00021500
//             SPACE=(&SPCUNIT2,(&NUMSPC),,CONTIG)                      00021600
//*                                                                     00021700
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),                               00021800
//             SPACE=(&SPCUNIT2,(&NUMSPC),,CONTIG)                      00021900
//*                                                                     00022000
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                    00022100
//             SPACE=(&SPCUNIT2,(&NUMSPC),,CONTIG)                      00022200
//*                                                                     00022300
//* INPUT DATA SET - MASTER FILE INTERNAL TRANSACTIONS                  00022400
 •
```

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Figure 4.4.5-a - continued. Cataloged Procedure EPFMM30

```
//*                                                                     00022500
//FPSINPT   DD DSNAME=&&INTRN2,                                         00022600
//             DISP=(SHR,PASS)                                          00022700
//*                                                                     00022800
//* OUTPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS          00022900
//*                                                                     00023000
//FPSOUTP   DD UNIT=&TEMP,                                              00023100
//             DISP=(NEW,PASS,DELETE),                                  00023200
//             SPACE=(TRK,(&WORKSPC),RLSE),                             00023300
//             DSNAME=&&SORTD3                                          00023400
//*                                                                     00023500
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00023600
//*                                                                     00023700
//FPSDIAG   DD SYSOUT=&OUT                                              00023800
//*                                                                     00023900
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00024000
//*                                                                     00024100
//SYSPRINT  DD SYSOUT=&OUT                                              00024200
//*                                                                     00024300
//SYSOUT    DD SYSOUT=&OUT                                              00024400
//*                                                                     00024500
//SYSDBOUT  DD SYSOUT=&OUT                                              00024600
//*                                                                     00024700
//SYSDTERM  DD SYSOUT=&OUT                                              00024800
//*                                                                     00024900
//SYSUDUMP  DD SYSOUT=&OUT                                              00025000
//*                                                                     00025100
//*                                                                     00025200
//UPDATE  EXEC PGM=&PROG5,                                              00025300
//             REGION=&REGION5,                                         00025400
//             TIME=(&TIME5)                                            00025500
//*                                                                     00025600
//* MAINTAIN EIS/PS MASTER FILE                                         00025700
//*                                                                     00025800
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00025900
//             VOLUME=(PRIVATE,RETAIN),                                 00026000
//             DISP=(SHR,PASS)                                          00026100
//*                                                                     00026200
//* INPUT DATA SET - OPTION CARD                                        00026300
//*                                                                     00026400
//FPSOPIN   DD DDNAME=OPTIONS,                                          00026500
//             DCB=BLKSIZE=80                                           00026600
//*                                                                     00026700
//* INPUT DATA SET - SORTED MASTER FILE INTERNAL TRANSACTIONS           00026800
//*                                                                     00026900
//FPSINTR   DD DSNAME=&&SORTD3,                                         00027000
//             DISP=(SHR,PASS)                                          00027100
//*                                                                     00027200
//* INPUT DATA SET - OLD MASTER FILE                                    00027300
//*                                                                     00027400
//FPSOLDF   DD DSNAME=&PROJECT..DATA.&OLDMSTR,                          00027500
//             VOLUME=(PRIVATE,RETAIN),                                 00027600
//             DISP=(SHR,PASS)                                          00027700
//*                                                                     00027800
//* OUTPUT DATA SET - NEW MASTER FILE                                   00027900
//*                                                                     00028000
```

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Figure 4.4.5-a - continued. Cataloged Procedure EPFMM30

```
//EPSNWMF    DD DSNAME=&PROJECT..DATA.&NEWMSTR,                          00028100
//              UNIT=&UNIT,                                              00028200
//              VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                     00028300
//              DISP=(&DISP),                                            00028400
//              SPACE=(&SPCUNIT,(&PRIMARY,&SECNDRY),RLSE)                00028500
//*                                                                      00028600
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                  00028700
//*                                                                      00028800
//EPSDIAG    DD SYSOUT=&OUT                                              00028900
//*                                                                      00029000
//* OUTPUT DATA SET - MASTER FILE INTERNAL TRANSACTION LISTING           00029100
//*                                                                      00029200
//EPSINTL    DD SYSOUT=&OUT                                              00029300
//*                                                                      00029400
//* OUTPUT DATA SET - OLD MASTER LISTING                                 00029500
//*                                                                      00029600
//EPSOLD     DD SYSOUT=&OUT                                              00029700
//*                                                                      00029800
//* OUTPUT DATA SET - NEW MASTER LISTING                                 00029900
//*                                                                      00030000
//EPSNEW     DD SYSOUT=&OUT                                              00030100
//*                                                                      00030200
//* OUTPUT DATA SETS - SYSTEM OPERATION                                  00030300
//*                                                                      00030400
//SYSPRINT   DD SYSOUT=&OUT                                              00030500
//*                                                                      00030600
//SYSOUT     DD SYSOUT=&OUT                                              00030700
//*                                                                      00030800
//SYSDBOUT   DD SYSOUT=&OUT                                              00030900
//*                                                                      00031000
//SYSUTERM   DD SYSOUT=&OUT                                              00031100
//*                                                                      00031200
//SYSUDUMP   DD SYSOUT=&OUT                                              00031300
//*                                                                      00031400
```

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Figure 4.4.5-a - continued. Cataloged Procedure EPFMM30

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087.CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPNEWMST would be the full data set name of an EIS/PS master file
PROG1	PMSEFGN	Master file emission factor transaction generator program
PROG2	PSREFIN	Master file internal transaction pre-insertion sort program
PROG3	PMSEFIN	Master file internal transaction emission factor insertion program
PROG4	PSRINTR	Master file internal transaction sort program
PROG5	PFMMSTR	Master file maintenance program
REGION1	100K	Region size allocated for execution of PMSEFGN
REGION2	150K	Region size allocated for execution of PSREFIN
REGION3	100K	Region size allocated for execution of PMSEFIN
REGION4	150K	Region size allocated for execution of PSRINTR
REGION5	150K	Region size allocated for execution of PFMMSTR
TIME1	'1,0'	Time allocated for execution of PMSEFGN
TIME2	'1,0'	Time allocated for execution of PSREFIN
TIME3	'1,0'	Time allocated for execution of PMSEFIN
TIME4	'1,0'	Time allocated for execution of PSRINTR
TIME5	'1,0'	Time allocated for execution of PFMMSTR
OLDMSTR	EPOLDMST	Lowest-level index of old master file

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Figure 4.4.5-b. Substitutable Parameters for EPFMM30

Parameter Name	Default Value	Description
NEWMSTR	EPNEWMST	Lowest-level index of new (or updated) master file
EMFCFIL	EPEMFFIL	Lowest-level index of emission factor file
UNIT	3330	Unit type to which new (or updated) master file is to be written
SERIAL	CDHSPK	Serial number of volume to which new (or updated) master file is to be written
DISP	'NEW,CATLG, DELETE'	Disposition of new (or updated) master file
SPCUNT1	TRK	Units in which space for new (or updated) master file is to be allocated
PRIMARY	20	Primary space allocation for new (or updated) master file
SECNDRY	10	Secondary space allocation for new (or updated) master file
TEMP	SYSDA	Unit type for temporary work space
WORKSPC	'20,10'	Space allocation for sort work areas
OUT	A	SYSOUT class for all print files
SPCUNT2	TRK	Units in which space for sort work areas is to be allocated

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Figure 4.4.5-b - continued. Substitutable Parameters for EPFMM30

5.0 DATA ACCESSING AND MANIPULATION

5.1 INTRODUCTION

EIS/PS provides the user with various data accessing and manipulation capabilities which are primarily designed to perform intermediate steps in the production of EIS/PS reports. These are (1) the capability to extract or retrieve specific data from the master file; (2) the capability to create a sorted file; and (3) the capability to concatenate two internal transaction files.

5.2. RETRIEVAL

5.2.1. INTRODUCTION

The retrieval function in EIS/PS is performed by executing two programs: the retrieval language processor program, PRTLNGP (EP0140), and the generated retrieval program, PRTGENR (EP0150). The retrieval language processor program must be executed first. All retrieval specifications are processed by PRTLNGP (EP0140); based upon those retrieval specifications, PRTLNGP (EP0140) produces the generated retrieval program, PRTGENR (EP0150). This generated retrieval program must be compiled and link edited before it can be executed. When PRTGENR (EP0150) is executed, it processes master file records and selects those records which satisfy the retrieval specifications that were entered into PRTLNGP (EP0140). The selected records are written to an output file, which is referred to as an answer file. The answer file has the same format as the EIS/PS master file and may be used as input to any EIS/PS program that uses the master file as input. Information on the specific records that can be retrieved can be found in Section 5.2.2. Refer to Figure 5.2.1-a for a flowchart of the EIS/PS retrieval function.

Detailed information on PRTLNGP (EP0140) and on the retrieval specifications can be found in Section 5.2.2. Detailed information on PRTGENR (EP0150) can be found in Section 5.2.3.

Three cataloged procedures are available for executing the retrieval programs. They are EPRTM10, EPRTM20, and EPRTM30. EPRTM30 executes PRTLNGP (EP0140) and compiles, link edits, and executes the generated retrieval program, PRTGENR (EP0150). PRTGENR (EP0150) is not saved. See Section 5.5.2 for additional information on EPRTM30.

If the user frequently performs the same retrieval, he should save the load module of the generated retrieval program created by PRTLNGP (EP0140) for that retrieval. He can then perform the retrieval by executing this load module directly, using the cataloged procedure EPRTM20 (see Section 5.2.3.5). The load module can be created and saved by executing the cataloged procedure EPRTM10 (see Section 5.2.2.5).

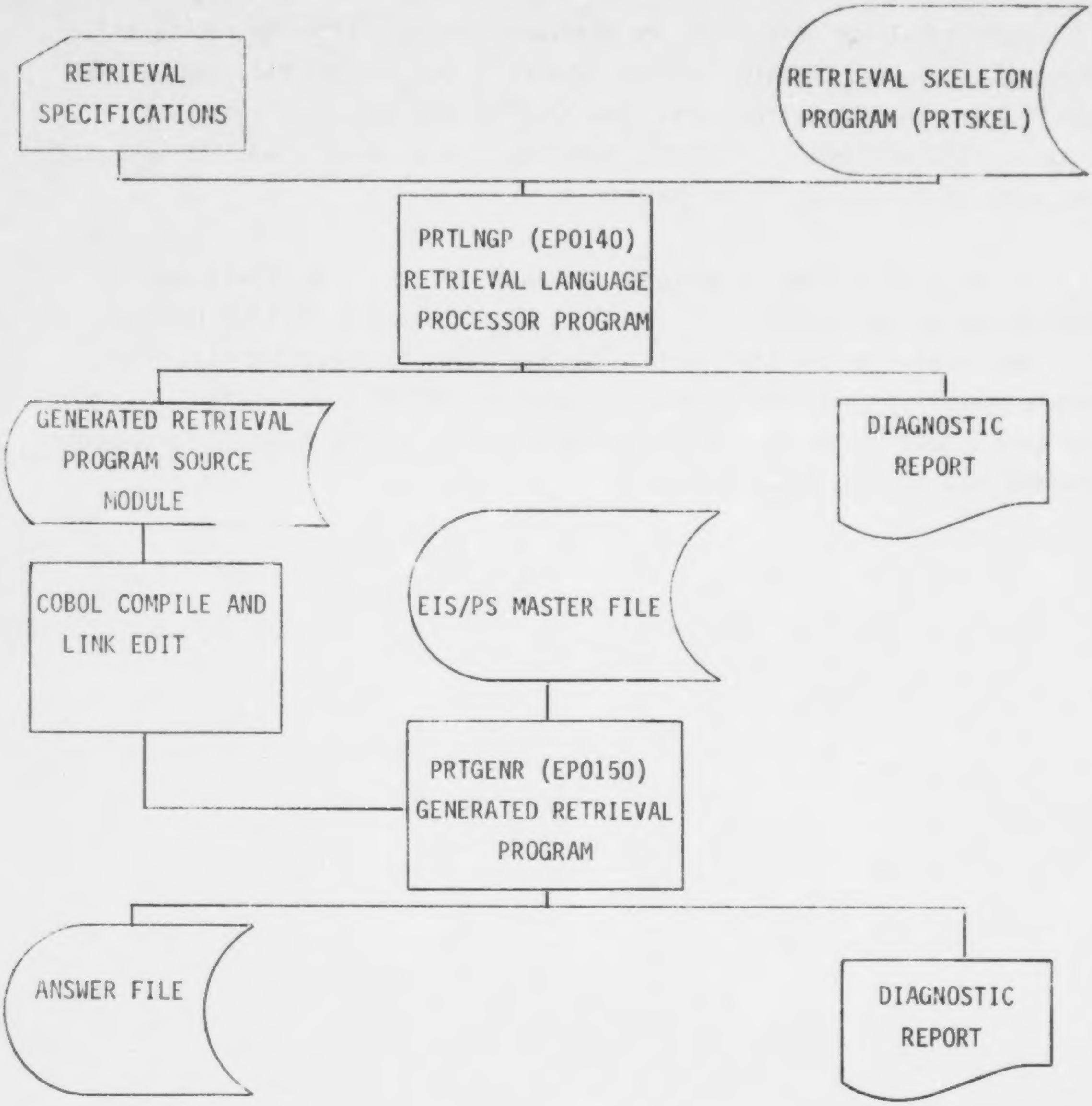
RETRIEVAL SPECIFICATIONS
RETRIEVAL SKELETON PROGRAM (PRTSKEL)
PRTLNGP (EP0140) RETRIEVAL LANGUAGE PROCESSOR PROGRAM
GENERATED RETRIEVAL PROGRAM SOURCE MODULE
DIAGNOSTIC REPORT
COBOL COMPILE AND LINK EDIT
EIS/PS MASTER FILE
PRTGENR (EP0150) GENERATED RETRIEVAL PROGRAM
ANSWER FILE
DIAGNOSTIC REPORT

Figure 5.2.1-a. Retrieval Flowchart

5.2.2 RETRIEVAL LANGUAGE PROCESSOR PROGRAM - PRTLNGP (EP0140)

5.2.2.1 Description

PRTLNGP (EP0140) is the first of two EIS/PS programs used to retrieve data from the EIS/PS master file. The generated retrieval program, PRTGENR (EP0150), must be compiled, link edited, and executed after PRTLNGP (EP0140) is run to complete the retrieval process.

The retrieval language processor program, PRTLNGP (EP0140), uses the retrieval skeleton program, PRTSKEL, and user-supplied retrieval specification cards to build a generated retrieval program, PRTGENR (EP0150). All options and retrieval requirements are contained in the specification cards (see Section 5.2.2.2).

The retrieval requests can be written in either the EIS/PS retrieval language (see Section 5.2.2.2) or in COBOL. COBOL statements can be included on cards with the execution JCL or stored as copy members in an external source library.

A single retrieval may specify statements containing fields from different record types. The language processor assigns a value to the retrieval according to the record types specified (0 - plant, 1 - point, 2 - SCC, 3 - comment). This value is used to determine which records to examine in the retrieval. For example, if only point or plant record fields are specified for retrieval, no SCC or comment records will be examined to determine if they satisfy the criteria for the retrieval.

If a record is retrieved, associated records will also be retrieved as follows:

Plant record field specified: If a plant record meets the retrieval criteria, it will be retrieved along with its associated point and SCC records. No comment records will be retrieved.

Point record field specified: If a point record qualifies, it will be retrieved with its associated plant and SCC records. Other points for the plant will be retrieved only if they qualify individually. No comment records will be retrieved.

SCC record field specified: If an SCC record qualifies, the associated plant, point, and all SCC's for the point will be retrieved. Other points for the plant will be retrieved only if they have associated SCC's which meet the retrieval criteria. No comment records will be retrieved.

Comment record field specified: If a comment record qualifies, the associated plant, point, and all SCC records for the point will also be retrieved. Other points for the plant will be retrieved only if they have comment records and those comment records qualify.

5.2.2.2 File Formats

PRTLNGP (EP0140) uses two input files: the retrieval skeleton program, PRTSKEL, which is stored in a cataloged source library, and the retrieval specification card file. The retrieval specification cards consist of retrieval control cards and retrieval request cards. The control cards indicate the beginning and end of the retrieval specification file and the language in which the requests are written. The control cards also contain the member name if one is used for a COBOL retrieval. Figure 5.2.2-a illustrates the format of the control cards and Figure 5.2.2-b contains the field definitions.

The retrieval requests precisely identify the data to be retrieved from the master file. The data names that can be used for these requests are listed in Figure 5.2.2-c. Definition of master file fields can be found in Figure 4.3.5-b. The EIS/PS retrieval language requirements are discussed in Section 5.2.2.2.1; the COBOL requirements, in Section 5.2.2.2.2.

Two output files are produced: a temporary file containing the retrieval source program, PRTGENR, and a diagnostic report (see Figure 5.2.2-d).

5.2.2.2.1 EIS/PS retrieval language -The EIS/PS retrieval language is designed to allow the user to select records from the EIS/PS master file based upon the value of specific fields. See Figure 5.2.2-c for a list of those master file fields that can be used in the EIS/PS retrieval language. The EIS/PS retrieval language specifications are written in the format described in Figure 5.2.2-e. See Figure 5.2.2-f for the definitions of the fields in these statements.

There are two types of operators used in the EIS/PS retrieval language: the relational and the Boolean. The relational operator indicates the relationship between a subject name and an object name. That is to say, the relational operator actually asks a question and assigns a truth value (true or false) depending on the answer to that question. The valid relational operators are '=' (equality), '>' (greater than), and '<' (less than). the construction of a relationship is as follows:

'subject name' 'relational operator' 'object name'.

An easy way to determine the truth value of the relationship is to ask the following question:

Is 'subject name' 'relational operator' 'object name'?

If the answer is 'yes', the truth value of that relationship is true, if the answer is 'no', the truth value is false. The following statements are examples of relationships and their truth values:

Subject Name	Relational Operator	Object Name	Truth Value
11	=	11	True
11	=	12	False
11	<	12	True
11	<	10	False
11	>	10	True
11	>	12	False

The Boolean operator determines a truth value for a relationship or a set of relationships. The valid Boolean operators are NOT, AND, and OR. The construction of a Boolean expression involving AND or OR is as follows:

'Relationship 1' 'Boolean operator' 'Relationship 2'.

An easy way to determine the truth value of an expression using AND is to ask the question:

Is the truth value of both relationships true?

If the answer is 'yes', the truth value of the expression is true; if the answer is 'no', the truth value is false. An easy way to determine the truth value of a Boolean expression using OR is to ask the question:

Is the truth value of either one of the relationships true?

If the answer is 'yes', the truth value of the expression is true; if the answer is 'no', the truth value is false.

The basic construction of a Boolean expression using NOT is as follows:

'NOT' 'relationship'.

An easy method to determine the truth value of the NOT expression is to reverse the truth value of the relationship; in other words, if the truth value of the relationship is true, then the truth value of the NOT relationship is false and vice-versa. A table of truth values for Boolean expressions is shown in Figure 5.2.2-g.

The use of relationships and Boolean expressions in EIS/PS retrievals is shown in the following set of examples. The examples will be structured as follows: (1) an assumption concerning the specific data to be retrieved from an existing master or answer file; (2) the EIS/PS retrieval statements needed to accomplish the request; (3) a brief discussion of how the computer will evaluate the retrieval specifications; (4) a brief discussion of the records which qualify for retrieval. It will be extremely helpful to keep in mind that during a retrieval, the computer is examining only one single record at a time. After that record has been examined, and its qualification for retrieval determined, the following record in the file is then examined.

Example 1

Assume you want to retrieve all of the data in the master file for county 0400. The retrieval control statements to accomplish that request are:

Col 1-31 Subject Name	Col 33 Negation Flag	Col 35 Relational Operator	Col 37-67 Object Name	Col 69-71 Boolean Operator
$$SELECT		=	'0400'	
COUNTY				
$$END				

Each plant record in the input master file will be individually and sequentially examined, and the question 'is the county equal to 0040?' will be asked of each individual record . Thus, in this retrieval, only those plant records in the master file that have a 0040 in the COUNTY field (and their associated point and SCC records) will be retrieved. No comment records will be retrieved.

Example 2

Assume you want to retrieve the records for county 0040 and SCC 40100101. The retrieval statements for this request are:

Col 1-31 Subject Name	Col 33 Negation Flag	Col 35 Relational Operator	Col 37-67 Object Name	Col 69-71 Boolean Operator
$$SELECT				
COUNTY		=	'0040'	AND
SCC		=	'40100101'	
$$END				

In this retrieval we have a Boolean expression containing two relationships. For each individual SCC record in the master file, the computer evaluates each relationship separately and then evaluates the Boolean expression. Thus, it determines if the COUNTY field of the record is 0040 and then if the SCC field is 40100101. After obtaining the truth value for each relationship, it then evaluates the Boolean expression. If, and only if, the truth value of both relationships is true, then the Boolean expression AND is true and that SCC record will be retrieved. The plant and point record for the SCC and all other SCC records associated with the point will also be retrieved. No comment records will be retrieved.

Example 3

Assume you want to retrieve data from AQCR 112 for sulfur dioxide (42401) and particulates (11101). The retrieval statements to accomplish the request are:

Col 1-31 Subject Name	Col 33 Negation Flag	Col 35 Relational Operator	Col 37-67 Object Name	Col 69-71 Boolean Operator
$$SELECT				
AQCR		=	'112'	AND
POLLUTANT-ID		=	'42401'	OR
AQCR		=	'112'	AND
POLLUTANT-ID		=	'11101'	
$$END				

In this retrieval we have four relationships and two different Boolean operators. The lowest record to be examined for the retrieval is the point record. The computer now has the problem of determining which operator to evaluate first. That is, what is the hierarchy of the relational and Boolean operators? If an expression does not contain parentheses, the computer evaluates according to the following hierarchy:

1st (level 1)	All relational operators
2nd (level 2)	Boolean NOT
3rd (level 3)	Boolean AND
4th (level 4)	Boolean OR

If there are operators on the same level, the computer evaluates those operators from left to right (top to bottom).

Therefore, using these rules for evaluating expressions, the computer will determine a truth value for the entire expression for each individual point record as follows:

Step	Operation
1	AQCR = '112'
2	POLLUTANT-ID = '42401'
3	AQCR = '112'
4	POLLUTANT-ID = '11101'
5	Result of Step 1 AND result of Step 2
6	Result of Step 3 AND result of Step 4
7	Result of Step 5 OR result of Step 6

Referring to Figure 5.2.2-g, for a point record with AQCR 112 containing particulates, Step 7 will be evaluated as 'False' OR 'True', which has a value of 'True', and the record will be retrieved. For a point record with AQCR 112 containing sulfur dioxide, Step 7 will be evaluated as 'True' OR 'False', which is 'True', and the record will be retrieved. For any other record not meeting the specifications, Step 7 will be 'False'; thus, any record not containing particulates for AQCR 112 or sulfur dioxide for AQCR 112 will not be retrieved. The plant and SCC records associated with the retrieved point records will also be retrieved.

NOTE: Step 7 can never be evaluated as 'True' OR 'True' since it is impossible to have an individual record containing both a 42401 (sulfur dioxide) and 11101 (particulates) in the point pollutant ID field.

In example 3, we used the expression AQCR = '112' twice because of the order in which the Boolean operators are evaluated. This order can be altered by the use of parentheses in the specifications. However, the use of parentheses in EIS/PS retrievals is subject to the following restrictions:

The first reference to a repeating field from the point record (such as POLLUTANT-ID) or to any field from the SCC record must occur before the first set of parenthesis.

A repeating field or an SCC field must not be immediately followed by a right parenthesis (e.g., POLLUTANT-ID) is not allowed).

A repeating field cannot be specified after an SCC field has been specified.

Note that a dummy statement such as POLLUTANT-ID = POLLUTANT-ID can be included in the specifications to satisfy the first restriction.

Example 4

This example is the same as Example 3, but this time parentheses will be used. That is, retrieve sulfur dioxide (42401) and particulates (11101) for AQCR 112. The retrieval statements to accomplish this request are:

Col 1-22 Subject Name	Col 24 Negation Flag	Col 26 Relational Operator	Col 28-67 Object Name	Col 69-71 Boolean Operator
$$SELECT				
AQCR		=	'112'	AND
POLLUTANT-ID		=	POLLUTANT-ID	AND
(POLLUTANT-ID		=	'42401'	OR
POLLUTANT-ID		=	'11101')	
$$END				

To evaluate parenthetical expressions, the computer will first find the least most inclusive pair (i.e., the innermost pair) of parentheses (see Figure 5.2.2-h) and derive a truth value for that parenthetical expression using the normal method of evaluation. It then proceeds through all sets of parentheses determining the truth value for each set of parentheses. After having evaluated the parenthesized portion of the expression, the nonparenthesized expression is evaluated as we have shown previously. Thus, the computer evaluates this retrieval example as follows:

Step	Operation
1	POLLUTANT-ID = '42401'
2	POLLUTANT-ID = '11101'
3	Result of Step 1 OR result of Step 2
4	AQCR = '112'
5	POLLUTANT-ID = POLLUTANT-ID
6	Result of Step 4 AND Result of Step 5
7	Result of Step 6 AND Result of Step 3

Note that the statement POLLUTANT-ID = POLLUTANT-ID is a dummy statement (that is, it will always be evaluated as true) which was included to satisfy the requirement that the first reference of a repeating data name from the point record (such as POLLUTANT-ID) or any data name from the SCC record (such as SCC) must occur before the first set of parentheses.

Example 4 will retrieve the same records as example three. Thus, every point record which qualifies will be accompanied by its associated plant and SCC records.

Example 5

As an example of the NOT Boolean operator, consider a retrieval for comment records with line number not greater than 10 for county 0360. The retrieval statements are:

Col 1-22 Subject Name	Col 24 Negation Flag	Col 26 Relational Operator	Col 28-67 Object Name	Col 69-71 Boolean Operator
$$SELECT				
COUNTY		=	'0360'	AND
LINE-NUMBER	N	>	'010'	
$$END				

The steps for evaluating this retrieval would be:

Step	Operation
1	COUNTY = '0360'
2	LINE-NUMBER > '010'
3	NOT result of Step 2
4	Result of Step 1 AND result of Step 3

All comment records with line number not greater than 10 for county 0360 will be retrieved. The associated plant record, point record, and all SCC records for the point will also be included. Note that only those points which have a qualifying comment record will be included.

5.2.2.2.2 COBOL retrievals - In-line COBOL language specifications are entered immediately following the $$SELECT card, which must have USER coded as the language keyword. These cards are punched according to COBOL rules for syntax and punctuation. Any user-defined paragraph or section name should begin with the prefix USER to avoid conflict with other names in the program.

Any valid PROCEDURE DIVISION statements, with the exception of DECLARATIVES, can be entered. Since the retrieval language processor program does not examine the COBOL statements, any errors could result in COBOL diagnostics or unpredictable results. The data field named SEG-1-SUB (PIC 99 COMP SYNC) is provided for use as a subscript for referencing repeating data names in the point records. The field WORK-SUB can be used to reference the SCC records stored for a point. The number of stored SCC records is SET-2-SUB.

The COBOL reserved data name TALLY can be used as an accumulator. All valid data names shown in Figure 5.2.2-c can be used. The QUALIFICATION-ACHIEVED-SW is used to indicate whether or not a record is written in the answer file (QUALIFICATION-ACHIEVED-SW equal to TRUE). The data names TRUE and FALSE can be used to set this switch.

NOTE: The user is reminded that the above rules are only valid for user-supplied COBOL retrievals (either in-line or copy member).

Any retrieval that can be run using the EIS/PS retrieval language can also be run using the USER option and COBOL statements, but nothing is gained in these retrievals by using COBOL. However, some retrievals can only be accomplished by using COBOL. An example follows to illustrate the advantages of COBOL retrievals.

When running the EIS/PS language retrievals, each record in the answer file is exactly the same as the corresponding record in the input master file; i.e., no changes can be made to the records. In a COBOL retrieval, changes can be made to the answer file records. Example 1 illustrates one use of this capability.

The paragraph 'SET-QUAL-LEVEL' must be included any in-line COBOL retrieval. This paragraph must contain a statement which assigns a value to the data name QUALIFICATION-REQUIRED. For example, if REQUIRE-0-QUAL were moved to QUALIFICATION-REQUIRED, only plant records would be examined to determine if they satisfied the retrieval criteria.

Example 1

Master file fields with a length greater than 30 cannot be used in an EIS retrieval. They can, however, be used in a COBOL retrieval. These fields include ESTABLISHMENT and MAILING ADDRESS in the plant record, and COMMENTS in the comment record. Assume a user wanted to know which plants had both ESTABLISHMENT and MAILING ADDRESS blank. The following in-line COBOL retrieval will produce an answer file containing those plants together with their associated point and SCC records.

```
$$SELECT USER
    QUALIFY-RECORDS.
      IF ESTABLISHMENT IS EQUAL TO SPACES AND MAILING-ADDRESS IS EQUAL TO
         SPACES MOVE TRUE TO QUALIFICATION-ACHIEVED-SW.
    QUALIFY-RECORDS-END.
      EXIT.
    SET-QUALIFICATION-LEVEL SECTION.
      SET-QUAL-LEVEL.
        MOVE REQUIRE-3-QUAL TO QUALIFICATION-REQUIRED.
      SET-QUAL-LEVEL-END.
      EXIT.
$$END
```

5.2.2.3 Options and Control Cards

The options allowed for PRTLNGP (EP0140) are specified on the $$SELECT retrieval control card. Information on this card can be found in Figures 5.2.2-a and 5.2.2-b.

5.2.2.4 Error Messages

PRTLNGP 001 CONDITIONAL - PREMATURE END OF FILE ON CONTROL CARD FILE - ASSUMING $$END CARD

Meaning: The last card for the retrieval specifications must be a $$END card. If this card is missing, this error message will be printed, but program execution will continue.

Action: No action required unless other errors have been detected.

PRTLNGP 002 ABORT - FIRST CONTROL CARD NOT $$SELECT

Meaning: The first control card for specifying a retrieval must be a $$SELECT card. If this card is not present, the run is aborted.

Action: Include the $$SELECT card and resubmit the job.

PRTLNGP 003 ABORT - NO CONTROL CARDS IN INPUT STREAM

Meaning: There must be at least a $$SELECT and a $$END card in the input run stream. The run was aborted.

Action: Include control cards as shown in 5.2.2.5.4 and resubmit the job.

PRTLNGP 004 ABORT - INVALID NEGATION CHARACTER

Meaning: The character N should be used as the negation flag; otherwise, the negation flag field should be blank. The run was aborted.

Action: Correct the error and resubmit the job.

PRLNGP 005 ABORT - INVALID RELATIONAL OPERATOR

Meaning: The only valid relational oeprators are = (denoting equal to), > (denoting greater than), and < (denoting less than); any other symbol will be rejected. The run was aborted.

Action: Correct the error and resubmit the job.

PRTLNGP 006 ABORT - INVALID BOOLEAN OPERATOR

Meaning: The valid Boolean operators are AND and OR. The run was aborted.

Action: Correct the error and resubmit the job.

PRTLNGP 007 ABORT - $$END CARD EXPECTED BUT NOT FOUND

Meaning: An EIS/PS retrieval language card with no Boolean operator was followed by another retrieval language card. Since only the last card in a retrieval can have no Boolean operator, the run was aborted.

Action: Correct the retrieval specifications and resubmit the job.

PRTLNGP 008 ABORT - UNMATCHED BOOLEAN OPERATOR

Meaning: The last EIS/PS retrieval language card in a retrieval had a Boolean operator with no matching relationship. The last retrieval language card in a retrieval must not contain a Boolean operator; therefore, the run was aborted.

Action: Correct the retrieval specifications and resubmit the job.

PRTLNGP 009 ABORT - DATA NAME INVALID - 'identifier'

Meaning: The data name specified by 'identifier' is incorrect. Data names must be spelled exactly, including hyphens, as shown in Figure 5.2.2-c. The run was aborted.

Action: Correct the data name (indicated by the identifier in the error message) and resubmit the job.

PRTLNGP 010 ABORT - UNBALANCED PARENTHESES AT FIRST OCCURENCE OF REPEATING SEG-1 NAME

Meaning: Any repeating data name from segment 1 (point records) must be referenced prior to a repeating segment 1 data name being referenced inside parentheses.

Action: If a valid repeating segment 1 specification cannot be provided prior to the parentheses, a dummy statement such as

ALLOWABLE = ALLOWABLE must be used. Correct the retrieval specifications and resubmit the job.

PRTLNGP 011 ABORT - REPEATING SEG-1 NAME SPECIFIED AFTER SEG-2 NAME

Meaning: Segment 1 (point records) repeating data names cannot be specified after segment 2 (SCC records) data names.

Action: Restructure the retrieval specifications to correct the order and resubmit the job.

PRTLNGP 012 ABORT - UNBALANCED PARENTHESES AT FIRST OCCURRENCE OF SEG-2 NAME

Meaning: The first occurrence of any segment 2 (SCC record) data name must not be inside parentheses.

Action: If a valid segment 2 specification cannot be provided prior to the parentheses, a dummy statement such as SCC = SCC must be used. Correct the retrieval specifications and resubmit the job.

PRTLNGP 013 ABORT - REPEATING NAME PRECEDES RIGHT PAREN - 'identifier'

Meaning: A repeating data name cannot be immediately followed by a right parenthesis.

Action: Correct the retrieval specifications and resubmit the job.

5.2.2.5 Cataloged JCL

The cataloged procedure EPRTM10, which is discussed below, executes the retrieval language processor program, PRTLNGP (EP0140); compiles and link edits the generated retrieval program, PRTGENR (EP0150); and stores the resulting load module. The cataloged procedure EPRTM20 is used to execute the stored load module and produce an answer file. See Section 5.2.3.5 for information on EPRTM20.

The cataloged procedure EPRTM30 executes the retrieval language processor program and compiles, link edits, and executes the generated retrieval program. The corresponding load module is not saved. See Section 5.5.2 for information on EPRTM30.

5.2.2.5.1 JCL listing - Figure 5.2.2-i contains a listing of the cataloged procedure EPRTM10.

5.2.2.5.2 Cross-reference of DD names and files

Program Name: PRTLNGP (EP0140)

DD Name	File Description	Input/Output
EPSSKEL	Retrieval skeleton program	Input
EPSINPT	Retrieval specification cards	Input
EPSPROC	Generated retrieval source program	Output
EPSDIAG	Diagnostic report	Output

5.2.2.5.3 User-supplied JCL - To execute the cataloged procedure EPRTM10, the user must supply job accounting information and the name for the generated retrieval program to be stored under. See Figure 5.2.2-j for a description of the procedure's substitutable parameters.

5.2.2.5.4 Sample run stream - The following run stream uses EPRTM10 to create the retrieval load module PRTGEN1. This load module can then be executed using the procedure EPRTM20; see Section 5.2.3.5.4 for that run stream. The EIS/PS retrieval specifications entered indicate that the retrieval will be for state 12 and AQCR 001.

```
// EXEC    EPRTM10,
//         PGMSAVE=PRTGEN1
//GENER.INPUT DD *
$$SELECT
STATE                  = '12'                             AND
AQCR                   = '001'
$$END
/*
```

5.2.2.6 Warnings and Special Instructions

The retrieval language processor program, PRTLNGP (EP0140), edits the retrieval specification control cards and the EIS/PS retrieval language cards, but does not edit user-written COBOL retrieval statements.

Both cataloged procedures EPRTM30 and EPRTM10 execute the COBOL compiler to compile the retrieval source program generated by PRTLNGP (EP0140). During the compilation of the generated retrieval source program, errors may be encountered that were not detected by PRTLNGP (EP0140). Also, errors in the user-written COBOL retrieval statements will be detected by the COBOL compiler. Thus, when executing EPRTM30 or EPRTM10, error messages may be generated by the COBOL compiler. When this occurs, the user should examine the retrieval specification cards for errors. If no errors can be found, the user should contact NADB for assistance.

General rules for retrieval specification control cards are presented below:

> Only the first $$SELECT card is edited for special option fields. When coded, these optional fields must occur in exactly the columns specified in Figure 5.2.2-a and must be spelled exactly as stated in Figure 5.2.2-b.
>
> A $$END card must be the last card in the specification. If any other cards follow the $$END card, they will be ignored.

For EIS/PS language specifications, the following rules apply:

Names must be spelled exactly as shown in Figure 5.2.2-c.

All literals should be enclosed in quotes and should be the same length as that specified in Figure 5.2.2-c for the compared field.

If any repeating field satisfies the retrieval criteria, the entire record qualifies for retrieval.

If any SCC record satisfies the retrieval criteria, all SCC records for the associated plant will be retrieved.

Fields from the repeating portion of the point record or from the SCC record cannot be first specified inside a set of parentheses.

No fields from the repeating portion of the point record can be specified after fields from the SCC record.

A right parenthesis cannot immediately follow any repeating field.

COBOL statements should follow ANS COBOL specifications; they are not edited by PRTLNGP (EP0140).

When PRTLNGP (EP0140) is run and encounters an abort error, the generated retrieval source program, PRTGENR (EP0150), will contain statements that will cause compilation errors. Thus, the generated retrieval load module will not be produced nor executed. When an abort occurs, correct the error encountered by PRTLNGP (EP0140) and resubmit the job.

Comment records are not retrieved unless the retrieval specifications include a field from the comment record. When a comment record field is specified, no points will be retrieved unless they have qualifying comment records associated with them. Note that this precludes retrieving all point records for a county by including a comment record field in the specifications.

The language processor program, PRTLNGP (EP0140), must always be run prior to running the generated retrieval program, PRTGENR (EP0150). The two programs can be run together using the cataloged procedure EPRTM30, or the generated retrieval module can be stored using the cataloged procedure EPRTM10 and run later using the cataloged procedure EPRTM20.

When specifying a generated load module name during a run using the cataloged procedure EPRTM10, specify the load module name as the value of the substitutable parameter PGMSAVE in the user-suppplied JCL.

5.2.2.7 Cost Considerations

The following example provides an estimate of the cost of executing PRTLNGP (EP0140) and compiling and link editing PRTGENR (EP0150) using the cataloged procedure EPRTM10. EPRTM10 was executed on an IBM 370/168 for this example.

Size of skeleton program:	997 records
Number of retrieval specifications:	15 records
Size of generated program:	1012 records
CPU time:	.45 seconds
I/O time:	1.59 seconds
Total time:	2.04 seconds
Estimated cost:	$.29

5.2.2.8 Related Programs and Procedures

PRTLNGP (EP0140) must always be executed in conjunction with PRTGENR (EP0150). The procedure EPRTM30 executes both of these programs, while EPRTM10 executes PRTLNGP (EP0140) and EPRTM20 executes PRTGENR (EP0150).

Record Position	Field Length	Description
1 - 8	8	Card Type
9	1	Unused
10 - 13	4	Language Keyword
14 - 15	2	Unused
16 - 23	8	COBOL Member Name
24 - 80	57	Unused

Figure 5.2.2-a. EIS/PS Retrieval Control Card

Card Type: Identifies the type of control card.

Valid Codes: $$SELECT - Specifies the beginning of a retrieval request.
$$END - Specifies the end of a retrieval request and must appear alone on the card.

Field Length: 8 characters

Language Keyword: Identifies the type of retrieval language to be used.

Valid Codes: USER - Indicates that the retrieval specifications will be COBOL language statements.
blank - Indicates that EIS/PS retrieval language specifications will be used.

Field Length: 4 characters

COBOL Member Name: Indicates the name of a COBOL copy member residing in a partitioned data set and containing COBOL language statements. A copy member can be used for USER retrievals.

Valid Codes: blank - Specifies that the COBOL retrieval statements will be placed after the $$SELECT card.
member name - Specifies the name of the member of an external source library where the COBOL retrieval statements reside. These COBOL statements must have been stored in the external source library under this member name prior to the execution of the retrieval.

Field Length: 8 characters

Figure 5.2.2-b. Definition of EIS/PS Retrieval Control Card Fields

Valid Data Names for Retrieval (Plant Data)

The following list of names from the plant record can be referenced in either EIS/PS retrieval language specifications or COBOL language specifications:

Data Name	Field Length	Data Name	Field Length
AQCR	3	RECORD-0-DAY	3
CITY	4	RECORD-0-YEAR	2
CONTACT	15	SEG-0-ID	1
COUNTY	4	STATE	2
DATE-OF-0-RECORD	5	TELEPHONE	10
LOCAL-CONTROL	2	USER-CONTROL-REGION	3
NUMBER-OF-EMPLOYEES	4	USER-PLANT-ID	12
OWNER	1	UTM-ZONE	2
PLANT-ID	4		
PRINCIPAL-PRODUCT	10		
PROPERTY-AREA	6		

The following two names from the plant record can be referenced only in COBOL language specifications:

ESTABLISHMENT
MAILING-ADDRESS

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Figure 5.2.2-c. Valid Retrieval Data Names

Valid Data Names for Retrieval (Point Data)

The following list of names from the point record can be referenced in either EIS/PS retrieval language specification or COBOL language specifications:

Data Name	Field Length	Data Name	Field Length	Data Name	Field Length
ANNUAL-THRUPUT	8	LATITUDE-DEGREE	2	SCHEDULE-MONTH	2
BOILER-DESIGN-CAPACITY	5	LATITUDE-MINUTE	2	SCHEDULE-YEAR	2
COMPLIANCE-SCHEDULE	4	LATITUDE-SECOND	2	SEG-1-ID	1
COMPLIANCE-STATUS	1	LONGITUDE	7	SEP-NOV	2
COMPLIANCE-STATUS-UPDATE	6	LONGITUDE-DEGREE	2	SIC	4
CONTROL-REGULATIONS	12	LONGITUDE-MINUTE	2	SPACE-HEAT	3
DATE-OF-1-RECORD	5	LONGITUDE-SECOND	2	STATUS-DAY	2
DAY-WEEK	1	MAR-MAY	2	STATUS-MONTH	2
DEC-FEB	2	NBR-OF-POLLUTANTS	2	STATUS-YEAR	2
DIAMETER	3	NEDS-POINT-ID	2	TEMPERATURE	4
ECAP	1	NORMAL-OPERATING	5	USER-POINT-ID	3
FLOW-RATE	7	PLUME	4	UTM-COORDINATES	9
HEIGHT	4	POINTS-PER-STACK	4	VELOCITY	5
HORIZONTAL	4	RECORD-1-DAY	3	VERTICAL	5
HOURS-DAY	2	RECORD-1-YEAR	2	WEEK-YEAR	2
IPP	2	REG-1	4		
JUN-AUG	2	REG-2	4		
LATITUDE	6	REG-3	4		

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Figure 5.2.2-c - continued. Valid Retrieval Data Names

Valid Data Names for Retrieval (Repeating Data)

The following list of names from the repeating portion of the point record can be referenced in either EIS/PS retrieval language specifications or COBOL language specifications:

Data Name	Field Length	Data Name	Field Length
ALLOWABLE	7	ESTIMATION-METHOD	1
CNTL-EQUIP-COST	7	MEASURED	7
CONTROL-EQUIPMENT	6	POLLUTANT-ID	5
		POTENTIAL	7
EMISSION-UNITS	1	PRIMARY-CNTL	3
EST-CONTROL-EFF	3	SECONDARY-CNTL	3
ESTIMATES	7	TEST-METHOD	1

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Figure 5.2.2-c - continued. Valid Retrieval Data Names

Valid Data Names for Retrieval (SCC Data)

The following list of names from the SCC record can be referenced in either EIS/PS retrieval language specifications or COBOL language specifications:

Data Name	Field Length	Data Name	Field Length
ASH-CONTENT	3	RECORD-2-DAY	2
BEC	5	SCC	8
BEC-ID	2	SCC-I	1
BEC-NUMBER	3	SCC-II	2
CONFIDENTIALITY	1	SCC-III	3
DATE-OF-2-RECORD	5	SCC-IV	2
EMISSION-FACTOR-SOURCE	1	SCC-SEQ-NBR	2
FUEL-PROCESS-RATE	7	SEG-2-ID	1
FUEL-UNITS	1	SEG-2-POINT-ID	2
HEAT-CONTENT	5	SOURCE-CODE	1
MAX-DESIGN-RATE	7	SOURCE-DESCRIPTION	25
NUMBER-OF-EF	2	SULFUR-CONTENT	3
RECORD-2-YEAR	2		

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Figure 5.2.2-c - continued. Valid Retrieval Data Names

Valid Data Names for Retrieval (Comment Data)

The following list of names from the comment record can be referenced in either EIS/PS retrieval language specifications or COBOL language specifications:

Data Name	Field Length
DATE-OF-3-RECORD	5
LINE-NUMBER	3
RECORD-3-DAY	3
RECORD-3-YEAR	2
PNR-SEQ-NBR	2
SEG-3-ID	1
SEG-3-POINT-ID	2

The following three names from the comment record can be referenced only in COBOL language specifications:

COMMENT-L
COMMENT-R
COMMENTS

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Figure 5.2.2-c - continued. Valid Retrieval Data Names

```
                        EIS/PS RETRIEVAL LANGUAGE PROCESSOR  -  DIAGNOSTIC MESSAGES                        PAGE     1

PROGRAM NAME: PRTLNGP (EP0140)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980


INPUT (CONTROL CARDS)

$$SELECT USER

         QUALIFY-RECORDS.

           IF ESTABLISHMENT IS EQUAL TO 'HANSON'   OR

             MAILING-ADDRESS IS EQUAL TO 'RED CAKE' OR

             (COMMENT-L IS NOT EQUAL TO ' '        AND

             LINE-NUMBER IS EQUAL TO '001')

             MOVE TRUE TO QUALIFICATION-ACHIEVED-SW.

         QUALIFY-RECORDS-END.

           EXIT.

        SET-QUALIFICATION-LEVEL SECTION.

         SET-QUAL-LEVEL.

           MOVE REQUIRE-3-QUAL TO QUALIFICATION-REQUIRED.

         SET-QUAL-LEVEL-END.

           EXIT.

$$END


NUMBER OF CONTROL CARDS READ:      15
NUMBER OF ERRORS DETECTED:          0
```

Figure 5.2.2-d. Diagnostic Report

Record Position	Field Length	Description
1 - 31	31	Subject Name
32	1	Unused
33	1	Negation Flag
34	1	Unused
35	1	Relational Operator
36	1	Unused
37 - 67	31	Object Name
68	1	Unused
69 - 71	3	Boolean Operator
72 - 80	9	Unused

Figure 5.2.2-e. Format for EIS/PS Retrieval Language Specifications

Subject Name: Specifies the name of the field in the EIS/PS master file record to be compared with the literal or the master file field name specified by the object name.

Valid Codes: Only those fields listed in Figure 5.2.2-c can be used. The spelling, including hyphen, must match exactly.

Field Length: 31 characters

Negation Flag: Indicates whether or not the Boolean NOT condition is in effect.

Valid Codes: N - Boolean NOT is in effect.
blank - Boolean NOT is not in effect.

Field Length: 1 character

Relational Operator: Indicates the relationship to be tested between the subject name and the object name.

Valid Codes: = - equal
< - less than
> - greater than

Field Length: 1 character

Object Name: A literal to be compared against the master file field specified by the subject name, or the name of a master file field (not in apostrophes) to be compared against the master file field specified by the subject name (e.g., subject name = object name).

Valid Codes: If a literal is used, it must be enclosed in apostrophes. The length of the literal must be exactly the same as the field length of the data name being compared (see Figure 5.2.2-c). If the

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Figure 5.2.2-f. Definition of EIS/PS Retrieval Language Specification Fields

name of a field from the master file is used, it must match exactly one of the names listed in Figure 5.2.2-c. However, it must not be enclosed in apostrophes.

Field Length: 31 characters

Boolean Operator: Identifies the type of connector used between the relationship specified on this control card and that specified on the next card.

Valid Codes: AND - Indicates that both relationships must be true in order for the entire relationship to be true.

OR - Indicates that if either relationship is true, the entire relationship is true.

blank - Indicates that there is no connector, and therefore, that there is no further specification.

Field Length: 3 characters

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Figure 5.2.2-f - continued. Definition of EIS/PS Retrieval Language Specification Fields

Truth Value of Relationship #1	Truth Value of Relationship #2	Truth Value of Relationship #1 AND Relationship #2
False	False	False
False	True	False
True	False	False
True	True	True

Truth Value of Relationship #1	Truth Value of Relationship #2	Truth Value of Relationship #1 OR Relationship #2
False	False	False
False	True	True
True	False	True
True	True	True

Truth Value of Relationship	Truth Value of NOT Relationship
True	False
False	True

Figure 5.2.2-g. Truth Values for Boolean Expressions

(((A) B) C)

The least inclusive pair of parentheses is the pair around the letter A, the second least inclusive set includes the letters A and B, and the most inclusive set in this example includes letters A, B, and C. Thus, the order of evaluation is from A to B to C.

(((A) B) ((C) D) E)

In this set both A and C have the least most inclusive pair; therefore, the order of operation is left to right on the same level of parentheses. That is, the order of operation in the above example is from A to C to B to D to E.

Figure 5.2.2-h. Examples of Parenthetical Expressions

```
//*                                                                       00000100
//*   PROCEDURE NAME: EPRTM10                                             00000200
//*   REVISION LEVEL: 1-00                                                00000300
//*   LAST UPDATE: P-1                                                    00000400
//*   DATE INCORPORATED: FEBRUARY 1, 1980                                 00000500
//*                                                                       00000600
//*   THIS PROCEDURE ALLOWS THE USER TO CREATE AND STORE                  00000700
//*   EIS/PS RETRIEVAL LOAD MODULES                                       00000800
//*                                                                       00000900
//EPRTM10 PROC PROJECT='CG.EPALMH.A0B7.C003.00.PS1',                      00001000
//             PROGRAM=PRTLNGP,                                           00001100
//             PARAM='LIB,SIZE=124K,BUF=30K,NOSEQ,SUPMAP,NOSOURCE',       00001200
//             TEMP=SYSDA,                                                00001300
//             REGION1=60K,                                               00001400
//             TIME1='1,0',                                               00001500
//             MEMBER=PRTSKEL,                                            00001600
//             PGMSAVE=RPTDELT,                                           00001700
//             OUT=A                                                      00001800
//*                                                                       00001900
//COMPILE EXEC PGM=&PROGRAM,                                              00002000
//             REGION=&REGION1,                                           00002100
//             TIME=(&TIME1)                                              00002200
//*                                                                       00002300
//* PRODUCE EIS/PS RETRIEVAL PROGRAM                                      00002400
//*                                                                       00002500
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                     00002600
//             VOLUME=(PRIVATE,RETAIN),                                   00002700
//             DISP=(SHR,PASS)                                            00002800
//          DD DSNAME=SYS1.COBLIB,                                        00002900
//             DISP=(SHR,PASS)                                            00003000
//*                                                                       00003100
//* INPUT DATA SET - RETRIEVAL PROGRAM SKELETON                           00003200
//*                                                                       00003300
//EPSSKEL   DD DSNAME=&PROJECT..SOURCE(&MEMBER),                          00003400
//             VOLUME=(PRIVATE,RETAIN),                                   00003500
//             DISP=(SHR,PASS)                                            00003600
//*                                                                       00003700
//* INPUT DATA SET - RETRIEVAL SPECIFICATION CARDS                        00003800
//*                                                                       00003900
//EPSINPT   DD DDNAME=INPUT,                                              00004000
//             DCB=BLKSIZE=80                                             00004100
//*                                                                       00004200
//* OUTPUT DATA SET - RETRIEVAL PROGRAM                                   00004300
//*                                                                       00004400
//EPSPROG   DD UNIT=&TEMP,                                                00004500
//             DISP=(NEW,PASS),                                           00004600
//             SPACE=(TRK,(5,2),RLSE),                                    00004700
//             DSNAME=&&PROGRAM                                           00004800
//*                                                                       00004900
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                                 00005000
//*                                                                       00005100
//EPSDIAG   DD SYSOUT=&OUT                                                00005200
//*                                                                       00005300
//* OUTPUT DATA SETS - SYSTEM OPERATION                                   00005400
//*                                                                       00005500
//SYSPRINT  DD SYSOUT=&OUT                                                00005600
```

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Figure 5.2.2-i. Cataloged Procedure EPRTM10

```
//*
//SYSOUT    DD SYSOUT=&OUT
//*
//SYSDBOUT  DD SYSOUT=&OUT
//*
//SYSDTERM  DD SYSOUT=&OUT
//*
//SYSUDUMP  DD SYSOUT=&OUT
//*
//COBOL   EXEC PGM=IKFCBL00,
//             PARM='&PARMS',
//             REGION=100K,
//             TIME=(2,0)
//*
//* COMPILE RETRIEVAL PROGRAM
//*
//*
//* INPUT DATA SET - SOURCE LIBRARY
//*
//SYSLIB    DD DSNAME=&PROJECT..SOURCE,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//*
//* INPUT DATA SET - COBOL RETRIEVAL PROGRAM SOURCE CODE
//*
//SYSIN     DD DSNAME=&&PROGRAM,
//             DISP=(OLD,DELETE)
//*
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES
//*
//SYSPRINT  DD SYSOUT=&OUT
//*
//* OUTPUT DATA SET - COBOL RETRIEVAL PROGRAM OBJECT CODE
//*
//SYSLIN    DD UNIT=&TEMP,
//             DISP=(NEW,PASS),
//             SPACE=(TRK,(5,2),RLSE),
//             DSNAME=&&OBJMOD
//*
//* UTILITY DATA SETS
//*
//SYSUT1    DD UNIT=&TEMP,
//             SPACE=(TRK,(50,100))
//*
//SYSUT2    DD UNIT=(&TEMP,SEP=SYSUT1),
//             SPACE=(TRK,(50,100))
//*
//SYSUT3    DD UNIT=(&TEMP,SEP=(SYSUT1,SYSUT2)),
//             SPACE=(TRK,(50,100))
//*
//SYSUT4    DD UNIT=(&TEMP,SEP=(SYSUT1,SYSUT2,SYSUT3)),
//             SPACE=(TRK,(50,100))
//*
//LKED    EXEC PGM=IEWL,
//             PARM='LIST,LET,XREF',
//             COND=(5,LT,COBOL),
```

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Figure 5.2.2-i - continued. Cataloged Procedure EPRTM10

```
//              REGION=100K,                                                   00011300
//              TIME=(1,0)                                                     00011400
//*                                                                            00011500
//* LINK-EDIT RETRIEVAL                                                        00011600
//*                                                                            00011700
//*                                                                            00011800
//* INPUT DATA SET - AUTO-CALL LIBRARY                                         00011900
//SYSLIB     DD DSNAME=&PROJECT..LOAD,                                         00012000
//              VOLUME=(PRIVATE,RETAIN),                                       00012100
//              DISP=(SHR,PASS)                                                00012200
//           DD DSNAME=SYS1.COBLIB,                                            00012300
//              DISP=(SHR,PASS)                                                00012400
//*                                                                            00012500
//* INPUT DATA SET - COBOL RETRIEVAL PROGRAM OBJECT CODE                       00012600
//*                                                                            00012700
//SYSLIN     DD DSNAME=&&OBJMOD,                                               00012800
//              DISP=(OLD,DELETE)                                              00012900
//           DD DDNAME=INPUT,                                                  00013000
//              DCB=BLKSIZE=80                                                 00013100
//*                                                                            00013200
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                                      00013300
//*                                                                            00013400
//SYSPRINT   DD SYSOUT=&OUT                                                    00013500
//*                                                                            00013600
//* OUTPUT DATA SET - COBOL RETRIEVAL PROGRAM LOAD MODULE                      00013700
//*                                                                            00013800
//SYSLMOD    DD VOLUME=(PRIVATE,RETAIN),                                       00013900
//              DISP=(OLD,PASS),                                               00014000
//              DSNAME=&PROJECT..LOAD(&PGMSAVE)                                00014100
//*                                                                            00014200
//* UTILITY DATA SET                                                           00014300
//*                                                                            00014400
//SYSUT1     DD UNIT=&TEMP,                                                    00014500
//              SPACE=(TRK,(10,5))                                             00014600
//*                                                                            00014700
```

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Figure 5.2.2-i - continued. Cataloged Procedure LPRTM10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087 CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA. EPMASTR would be the full data set name of an EIS/PS master file)
PROGRAM	PRTLNGP	Retrieval language processor program
TEMP	SYSDA	Unit type for temporary work space
PGMSAVE	PRTDFLT	Output load module member name
MEMBER	PRTSKEL	Retrieval program skeleton
OUT	A	SYSOUT class for all print files
REGION1	60K	Region size allocated for execution of PRTLNGP
TIME1	'1,0'	Time allocated for execution of PRTLNGP
PARAM	'LIB,SIZE=94K, BUF=10K, NOSEQ, SUPMAP, NOSOURCE'	Parameters for COBOL compiler

Figure 5.2.2-j. Substitutable Parameters for EPRTM10

5.2.3. GENERATED RETRIEVAL PROGRAM - PRTGENR (EP0150)

5.2.3.1. Description

PRTGENR (EP0150), the generated retrieval program, is the second of two EIS/PS programs used to retrieve data from the EIS/PS master file. The retrieval language processor program, PRTLNGP (EP0140), generates PRTGENR (EP0150) and must, therefore, be executed first. All retrieval requests and options are specified on control cards and retrieval specification cards input to PRTLNGP (EP0140) (see Section 5.2.2.2).

The retrieval process can be performed two ways. The first is to execute the cataloged procedure EPRTM30 (see Section 5.5.2). This procedure executes PRTLNGP (EP0140) and compiles, link edits, and executes PRTGENR (EP0150); PRTGENR (EP0150) is not saved. The second method allows the generated retrieval program to be saved for future runs (on other EIS/PS master files). Two cataloged procedures are used in this method; they may be run together in one job stream or at different times. The first of these procedures, EPRTM10, executes PRTLNGP (EP0140) and compiles, link edits, and saves the generated retrieval load module (see Section 5.2.2.5). The second procedure, EPRTM20, executes the stored retrieval load module (see Section 5.2.3.5). This load module corresponds to PRTGENR (EP0150), but it should be given a different name so that more than one retrieval can be stored.

For further discussion of the EIS/PS retrieval specifications, including sample retrievals, see Section 5.2.2.2.

5.2.3.2. File Formats

PRTGENR (EP0150) uses one input file, the EIS/PS master file. See Figure 4.3.9-a for the master file format.

There are two files which are output from PRTGENR (EP0150): a retrieved answer file and a diagnostic report. The answer file has the same format as the EIS/PS master file. See Figure 5.2.3-a for an example of the diagnostic report.

5.2.3.3. Options and Control Cards

There is no option card input to PRTGENR (EP0150); however, the optional features of the retrieval (such as is a user retrieval) can be specified on the $$SELECT control card input to the retrieval language processor program, PRTLNGP (EP0140). See Section 5.2.2.2 for a complete description of the $$SELECT card.

5.2.3.4. Error Messages

PRTGENR 001 ERROR - UNKNOWN RECORD TYPE FOUND - RECORD IGNORED

Meaning: A record type other than 0, 1, 2, or 3 was encountered. This message is accompanied by message 002, which gives key information for the record in error.

Action: Verify that a correct EIS/PS master (or answer) file was used as input. If not, enter the correct file and resubmit; otherwise, the file has a serious problem and NADB should be contacted.

PRTGENR 002 KEY = XXXXXXXXXXXXX, DATE = XXXXX, SEG-ID = XXX

Meaning: This message accompanies message PRTGENR 001 and indicates the record in error.

Action: See PRTGENR 001.

5.2.3.5. Cataloged JCL

The cataloged procedure EPRTM20 executes a stored generated retrieval load module and produces an answer file. This load module must have first been created and stored using the cataloged procedure EPRTM10. For information on EPRTM10, see Section 5.2.2.5.

5.2.3.5.1 JCL listing - Figure 5.2.3-b contains a listing of the cataloged procedure EPRTM20, which executes the program PRTGENR (EP0150).

5.2.3.5.2 Cross-reference of DD names and files

Program Name: PRTGENR (EP0150)

DD Name	File Description	Input/Output
EPSMSTR	EIS/PS master file	Input
EPSANSR	Retrieved answer file	Output
EPSDIAG	Diagnostic report	Output

5.2.3.5.3 User-supplied JCL -To execute the cataloged procedure EPRTM20, the user must supply job accounting information and data set names of the EIS/PS master file, the answer file, and the stored retrieval load module. See Figure 5.2.3-c for a description of the procedure's substi-tutable parameters.

5.2.3.5.4 Sample run stream -The following run stream uses the procedure EPRTM20 to execute the retrieval load module PRTGEN1. PRTGEN1 was created and stored by the procedure EPRTM10 (see Section 5.2.2.5.4 for the run stream). This retrieval will select all records for state 12 and county 0010. The master file is 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMMSTR', and the answer file is 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPANSWER'. See Figure 5.2.3-a for sample output.

```
//   EXEC    EPRTM20,
//           PROGRAM=PRTGEN1,
//           MSTRFIL=EPMMSTR,
//           ANSRFIL=EPANSWER
```

5.2.3.6 Warnings and Special Instructions

If PRTLNGP (EP0140) is run and encounters an ABORT error, PRTGENR (EP0150) will be executed (if it follows in the run stream) but will not produce a valid answer file. When this occurs, correct the error from PRTLNGP (EP0140) and resubmit the job.

The retrieval language processor program, PRTLNGP (EP0140), must always be run prior to running the generated retrieval program, PRTGENR (EP0150). The two programs can be run together using the procedure EPRTM30; or the generated retrieval module can be stored and run at a later date, using procedures EPRTM10 and EPRTM20.

The answer file is only a subset of the master file; any changes made to the answer file during the retrieval process are not reflected in the master file. See Section 5.2.2 for a discussion of the types of records that can be selected by a retrieval.

5.2.3.7. Cost Considerations

The following estimates are for the execution, on an IBM 370/168, of the sample run stream shown in Section 5.2.3.5.4 and illustrate the cost of executing EPRTM20.

Size of EIS/AS master file:	175 records
Size of answer file:	9 records
CPU time:	.23 seconds
I/O time:	.59 seconds
Total time:	.82 seconds
Estimated cost:	$.11

5.2.3.8. Related Programs and Procedures

The cataloged procedure EPRTM30 should be used to perform one-time retrievals. It executes the retrieval language processor program, PRTLNGP (EP0140), and compiles, link edits, and executes the generated retrieval program, PRTGENR (EP0150). After the retrieval has been completed, the generated retrieval program is deleted. For additional information on EPRTM30, see Section 5.5.2.

```
                    EIS/PS GENERATED RETRIEVAL PROGRAM  -  DIAGNOSTIC REPORT                    PAGE    1



PROGRAM NAME: PRTGENR (EP0150)
REVISION LEVEL: 1-80
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF MASTER FILE RECORDS READ:       175
NUMBER OF ANSWER FILE RECORDS WRITTEN:      9
NUMBER OF ERRORS DETECTED:                  0
```

Figure 5.2.3-a. Diagnostic Report

```
//*                                                                     00000100
//*    PROCEDURE NAME: EPRTM20                                          00000200
//*    REVISION LEVEL: 1-00                                             00000300
//*    LAST UPDATE #: P-1                                               00000400
//*    DATE INCORPORATED: FEBRUARY 1, 1980                              00000500
//*                                                                     00000600
//*    THIS PROCEDURE ALLOWS THE USER TO                                00000700
//*    EXECUTE STORED EIS/PS RETRIEVALS                                 00000800
//*                                                                     00000900
//EPRTM20 PROC PROJECT='CO.EPALOD.A0K7.CD05.HQ.PN1',                    00001000
//             PROGRAM=PRTDELT,                                         00001100
//             MSTRFIL=EPMASTER,                                        00001200
//             ANSWFIL=RTANSWAW,                                        00001300
//             REGION1=100K,                                            00001400
//             TIME1='5,0',                                             00001500
//             UNIT=3330,                                               00001600
//             SERIAL=CDDSPK,                                           00001700
//             DISP='NEW,CATLG,DELETE',                                 00001800
//             SPCUNIT=TRK,                                             00001900
//             PRIMARY=20,                                              00002000
//             SECNDRY=10,                                              00002100
//             OUT=A                                                    00002200
//*                                                                     00002300
//*                                                                     00002400
//RETRIEVE EXEC PGM=&PROGRAM,                                           00002500
//             REGION=&REGION1,                                         00002600
//             TIME=(&TIME1)                                            00002700
//*                                                                     00002800
//* RETRIEVE ANSWER FILE FROM EIS/PS MASTER FILE                        00002900
//*                                                                     00003000
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00003100
//             VOLUME=(PRIVATE,RETAIN),                                 00003200
//             DISP=(SHR,PASS)                                          00003300
//          DD DSNAME=SYS1.COBLIB,                                      00003400
//             DISP=(SHR,PASS)                                          00003500
//*                                                                     00003600
//* INPUT DATA SET - EIS/PS MASTER FILE                                 00003700
//*                                                                     00003800
//EPSMSTR   DD DSNAME=&PROJECT..DATA.&MSTRFIL,                          00003900
//             VOLUME=(PRIVATE,RETAIN),                                 00004000
//             DISP=(SHR,PASS)                                          00004100
//*                                                                     00004200
//* OUTPUT DATA SET - ANSWER FILE                                       00004300
//*                                                                     00004400
//EPSANSW   DD UNIT=&UNIT,                                              00004500
//             VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                     00004600
//             DISP=(&DISP),                                            00004700
//             SPACE=(&SPCUNIT,(&PRIMARY,&SECNDRY),RLSE),               00004800
//             DSNAME=&PROJECT..DATA.&ANSWFIL                           00004900
//*                                                                     00005000
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                               00005100
//*                                                                     00005200
//EPSDIAG   DD SYSOUT=&OUT                                              00005300
//*                                                                     00005400
//* OUTPUT DATA SETS - SYSUT2 OPERATION                                 00005500
//*                                                                     00005600
```

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Figure 5.2.3-b. Cataloged Procedure EPRTM20

```
//SYSPRINT  DD SYSOUT=K001                                                       00005700
//*                                                                              00005800
//SYSOUT    DD SYSOUT=K001                                                       00005900
//*                                                                              00006000
//SYSDBOUT  DD SYSOUT=K001                                                       00006100
//*                                                                              00006200
//SYSOTERM  DD SYSOUT=K001                                                       00006300
//*                                                                              00006400
//SYSUDUMP  DD SYSOUT=K001                                                       00006500
//*                                                                              00006600
```

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Figure 5.2.3-b - continued. Cataloged Procedure EPRTM20

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set name (e.g., CN.EPALMH.A087.CDHS.HQ.PNT. DATA.ECMASTER would be the full data set name of an EIS/PS master file)
PROGRAM	PRTDFLT	Stored retrieval load module (created by EPRTM10)
TIME1	'3,0'	Time allocated for execution of retrieval
MSTRFIL	EPMASTER	Lowest-level index of master file
ANSRFIL	EPANSWER	Lowest-level index of answer file
UNIT	3330	Unit type upon which the answer file is to reside
SERIAL	CDHSPK	Volume serial number of volume to which answer file is to be written
DISP	'NEW,CATLG,DELETE'	Disposition of answer file
SPCUNIT	TRK	Units in which space for answer file is to be allocated
PRIMARY	20	Primary space allocation for answer file
SECNDRY	10	Secondary space allocation for answer file
OUT	A	SYSOUT class for all print files
REGION1	100K	Region size allocated for execution of retrieval

Figure 5.2.3-c. Substitutable Parameters for EPRTM20.

5.3. SORT GENERATION

5.3.1. INTRODUCTION

EIS/PS provides the user with the capability to generate a master file sort program. This sort program can then be used to generate a sorted file.

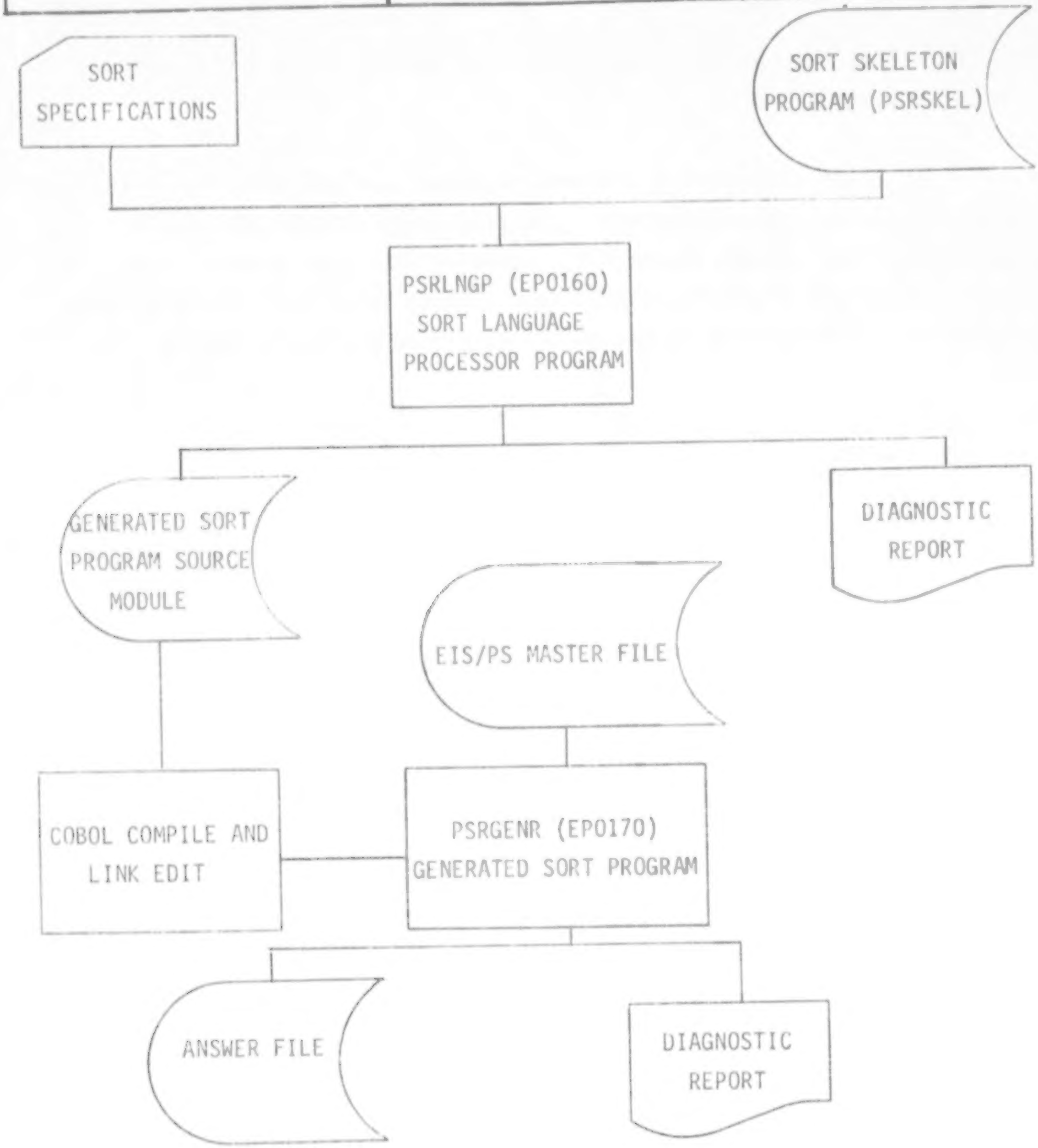
The sort generation function is performed by executing two programs: the sort language processor program, PSRLNGP (EP0160), and the generated sort program, PSRGENR (EP0170). The sort language processor program must be executed first. All sort specifications are processed by PSRLNGP (EP0160); based upon the sort specifications, PSRLNGP (EP0160) produces the second sort program, PSRGENR (EP0170), which is referred to as the generated sort program. This generated sort program must then be compiled and link edited before it can be executed. When it is executed, it processes master file records and produces a file of sorted records. The records in the output file will depend upon the sort specifications entered into PSRLNGP (EP0160). This output file has the same format as the EIS/PS master file, but it may contain duplicate records. See Figure 5.3.1-a for a flowchart of the EIS/PS sort generation function.

Detailed information on PSRLNGP (EP0160) and on the sort specifications can be found in Section 5.3.2. Detailed information on PSRGENR (EP0170) can be found in Section 5.3.3.

Three cataloged procedures are available for executing the sort programs. They are EPSRM10, EPSRM20, and EPSRM30. EPSRM30 executes PSRLNGP (EP0160) and compiles, link edits, and executes the generated sort program PSRGENR

(EP0170). PSRGENR (EP0170) is not saved. See Section 5.5.3 for additional information on EPSRM30.

If the user frequently performs the same sort, he should save the load module of the generated sort program created by PSRLNGP (EP0160) for that sort. He can then perform the sort by executing this load module directly, using the cataloged procedure EPSRM20 (see Section 5.3.3.5). The load module can be created and saved by executing the cataloged procedure EPSRM10 (see Section 5.3.2.5).



SORT SPECIFICATIONS
SORT SKELETON PROGRAM (PSRSKEL)
PSRLNGP (EP0160) SORT LANGUAGE PROCESSOR PROGRAM
GENERATED SORT PROGRAM SOURCE MODULE
DIAGNOSTIC REPORT
EIS/PS MASTER FILE
COBOL COMPILE AND LINK EDIT
PSRGENR (EP0170) GENERATED SORT PROGRAM
ANSWER FILE
DIAGNOSTIC REPORT

Figure 5.3.1-a. Sort Generation Flowchart

5.3.2 SORT LANGUAGE PROCESSOR PROGRAM - PSRLNGP (EP0160)

5.3.2.1 Description

PSRLNGP (EP0160) is the first of two EIS/PS programs used to sort data from the EIS/PS master file. The generated sort program, PSRGENR (EP0170), must be compiled, link edited, and executed after PSRLNGP (EP0160) is run to complete the sort process.

The sort language processor program, PSRLNGP (EP0160), uses the sort skeleton program, PSRSKEL, and user-supplied sort specification cards to build a generated sort program, PSRGENR (EP0170). All sort field requirements are contained in the specification cards. No more than 11 sort specification cards can be used, and the sum of the lengths of all the fields in these specifications must not exceed 234 characters. Only data names of fields from the plant, point, and fixed portion of the SCC records can be selected in the sort specifications. Figure 5.3.2-a lists the valid data names and the lengths of the fields.

The contents of the sorted answer file generated by the sort program depends on which type record the sort fields are taken from. All records in the sorted answer file will be in master file format, but the number of records will vary as follows:

Plant record sort fields: Each plant record will be accompanied by its associated point and SCC records. No new records are created.

Point record (fixed portion) sort fields: Each point record will be preceded by a copy of its associated plant record and followed by its associated SCC records. Thus, a new plant record is created for every point record.

Point record (repeating section) sort fields: A point record will be created for each pollutant in the repeating section of the original point record. Each of these new records will contain all of the information (i.e., all repeating sections) that was present in the original record. In addition, there will be one plant record and all the associated SCC records for each of the new point records. Thus, plant, point, and SCC records are created.

SCC record (fixed portion) sort fields: For each SCC record, a copy of the associated plant and point records accompany it. That is, both plant and point records are created.

Sort fields from both the repeating section of the point and the fixed portion of the SCC record: Records will be created to allow sets of one plant record, one point record, and one SCC record. There will be a set for each repeating section or pollutant in the point record. Thus, all three types of records can be created.

Two things should be noted about the sorted answer file. First, the sorted answer file contains no comment records. Second, as records are created, the size of the sorted answer file may be much greater than the original file. As an example, consider one plant with two points, each having 5 pollutants, and with 4 SCC records for each point. In the original file, there would be 11 records. The sorted answer file would then contain 11-120 records as outlined below:

11 records if only plant record fields are used for sorting.

12 records if the sort fields come from the fixed portion of the point record. An additional plant record is created so that each point record has its own plant record.

60 records if the sort fields come from the repeating section of the point record. Each of the 5 pollutants for a point will now have one point, one plant' and 4 SCC records (a total of 6 records), and there are 10 pollutants in all.

24 records if the sort fields come from the fixed portion of the SCC record. Each of the 8 SCC records will have its own associated plant and point records, giving 3 records per SCC.

120 records if the sort fields come from both the repeating section of the record and the fixed section of the SCC record; that is, 10 pollutants with 3 records each for each of the 4 SCC records per point.

If the sort fields come from more than one type of record, the highest possible number of records will be generated.

5.3.2.2 File Formats

PSRLNGP (EP0160) uses two input files: the sort skeleton program, PSRSKEL, which is stored in a cataloged source library, and the sort specification card file. The sort specification cards consist of sort control cards and sort request cards. The control cards indicate the beginning and end of the sort specification file. Figure 5.3.2-b illustrates the format of the control cards.

The sort request cards precisely identify the sort fields from the master file and their sort order. The data names that can be used for these requests are listed in Figure 5.3.2-a. Only fields from the plant, point, and fixed section of the SCC records can be used.

Two output files are produced: a diagnostic report (see Figure 5.3.2-c) and a temporary file containing the sort source program, PSRGENR.

5.3.2.3 Options and Control Cards

The program PSRLNGP (EP0160) has no options. The sort field requests are handled by sort specification cards which are discussed in Section 5.3.2.2.

5.3.2.4 Error Messages

PSRLNGP 001 CONDITIONAL - PREMATURE END OF FILE ON CONTROL CARD FILE, $$END CARD ASSUMED

Meaning: The last card for the sort specification must be a $$END card. If this card is missing, the error message will be printed, but program execution will continue.

Action: No action is required unless other errors have been detected.

PSRLNGP 002 CONDITIONAL - FIRST CONTROL CARD NOT $$SORT, ASSUMED PRESENT

Meaning: The first card for the sort specification must be a $$SORT card. If this card is missing, the error message will be printed, but program execution will continue.

Action: No action is required unless other errors have been detected.

PSRLNGP 003 ABORT - NO CONTROL CARDS IN INPUT STREAM

Meaning: There must be sort specifications in the input run stream. The run was aborted.

Action: Include the control cards as shown in 5.3.2.5.4 and resubmit the job.

PSRLNGP 004 ABORT - identifier - DATA NAME INVALID

Meaning: The data name specified by 'identifier' is incorrect. Data names must be spelled exactly, including hyphens, as shown in Figure 5.3.2-a. The run was aborted.

Action: Correct the data name (indicated by the identifier in the error message) and resubmit the job.

PSRLNGP 005 ABORT - ONLY $$END CARD FOUND IN INPUT STREAM

Meaning: A $$END card was the first card in the control card file.

Action: Correct the control card file and resubmit the job.

PSRLNGP 006 ABORT - NO VALID SORT REQUESTS

Meaning: No sort specifications were included in the control card file.

Action: Include sort specifications with the control cards and resubmit the job.

PSRLNGP 007 ABORT - UNEXPECTED END OF FILE ON INPUT PROGRAM

Meaning: The sort skeleton program is not complete.

Action: Verify that the correct name was specified in the JCL for the skeleton program. If an incorrect name was specified, correct it and resubmit the job. If the correct name was specified and the skeleton program is incomplete, contact NADB.

PSRLNGP 008 ABORT - MORE THAN 233 CHARACTERS IN DATA-NAME (TOTAL CHARACTER COUNT)

Meaning: The total field length of all the requested sort fields must not be greater than 233. The field lengths are given with the valid data names in Figure 5.3.2-a.

Action: Correct the sort specifications so that not more than 233 characters are requested and resubmit the job.

PSRLNGP 009 ABORT - MORE THAN 11 SORT REQUEST CARDS

Meaning: A maximum of 11 data names, each on an individual card, can be specified.

Action: Correct the sort specifications so that not more than 11 request cards are included and resubmit the job.

PSRLNGP 010 ABORT - REQUESTED SORT SEQUENCE NOT VALID

Meaning: Valid sort sequence codes are A (ascending) and D (descending).

Action: Correct the sort specifications and resubmit the job.

5.3.2.5 Cataloged JCL

The cataloged procedure EPSRM10 which is discussed below, executes the sort language processor program, PSRLNGP (EP0160); compiles and link edits the generated sort program, PSRGENR (EP0170); and stores the resulting load module. The cataloged procedure EPSRM20 is used to execute the stored load module and produce a sorted answer file. See Section 5.3.3.5 for information on EPSRM20.

The cataloged procedure EPSRM30 executes the sort language processor program and compiles, link edits, and executes the generated sort program. The corresponding load module is not saved. See Section 5.5.2 for information on EPSRM30.

5.3.2.5.1 JCL listing - Figure 5.3.2-d contains a listing of the cataloged procedure EPSRM10.

5.3.2.5.2 Cross-reference of DD names and files

Program Name: PSRLNGP (EP0140)

DD Name	File Description	Input/Output
EPSSKEL	Sort skeleton program	Input
EPSINPT	Sort specification cards	Input
EPSPROG	Generated sort source program	Output
EPSDIAG	Diagnostic report	Output

5.3.2.5.3 User-supplied JCL -To execute the cataloged procedure EPSRM10, the user must supply job accounting information and the name for the generated sort program to be stored. See Figure 5.2.2-e for a description of the procedure's substitutable parameters.

5.3.2.5.4 Sample run stream -The following run stream uses the cataloged procedure EPSRM10 to create the sort load module PSRGEN1. This sort module can then be executed using the cataloged procedure EPSRM20; see Section 5.3.3.5.4 for that run stream. The EIS/PS sort specifications entered indicate that the file will be sorted on pollutant ID.

```
//  EXEC   EPSRM10,
//         PGMSAVE=PSRGEN1
//GENER.INPUT DD *
$$SORT
POLLUTANT-ID                 A
$$END
/*
```

5.3.2.6 Warnings and Special Instructions

Both cataloged procedures EPSRM30 and EPSRM10 execute the COBOL compiler after PSRLNGP (EP0160) to compile the generated sort source program. During the compilation of the generated sort source program, errors may be encountered that were not detected by PSRLNGP (EP0160). Thus, when executing EPSRM30 or EPSRM10, error messages may be generated by the COBOL compiler. When this occurs, the user should examine the sort specification cards for errors. If no errors can be found, the user should contact NADB for assistance.

A $$SORT card must be the first card in the specifications.

A $$END card must be the last card in the specifications. If any other cards follow the $$END card, they will be ignored.

Names must be spelled exactly as shown in Figure 5.3.2-a.

When PSRLNGP (EP0160) is run and encounters an abort error, the generated sort source program, PSRGENR (EP0170), will contain statements that will cause compilation errors. Thus, the generated sort load module will not be produced nor executed. When an abort occurs, correct the error encountered by PSRLNGP (EP0160) and resubmit the job.

No comment records are output in the sorted answer file.

The resulting sorted answer file may be very large. The size depends upon which record the sort fields are from. Thus, care must be taken in choosing the sort fields. Also, enough space must be allocated for the sorted answer file.

The language processor program, PSRLNGP (EP0160) must always be run prior to running the generated sort program, PSRGENR (EP0170). The two programs can be run together using the cataloged procedure EPSRM30, or the generated sort module can be stored using the cataloged procedure EPSRM10 and run later using the cataloged procedure EPSRM20.

When specifying a generated load module name during a run using the cataloged procedure EPSRM10, the load module name must be specified as the value of the substitutable parameter PGMSAVE in the user-supplied JCL.

5.3.2.7 Cost Considerations

The following example provides an estimate of the cost of executing PSRLNGP (EP0160) and compiling and link editing PSRGENR (EP0170) using the cataloged procedure EPSRM10. EPSRM10 was executed on an IBM 370/168 for this example.

Size of skeleton program:	1209	records
Number of sort specifications:	5	records
Size of generated program:	1217	records
CPU time:	.57	seconds
I/O time:	1.89	seconds
Total time:	2.46	seconds
Estimated cost:	$.34	

5.3.2.8 Related Programs and Procedures

PSRLNGP (EP0160) must always be executed in conjunction with PSRGENR (EP0170). The procedure EPSRM30 executes both of these programs, while EPSRM10 executes PSRLNGP (EP0160) and EPSRM20 executes PSRGENR (EP0170).

Valid Data Names for Sort (Plant Data)

Data Name	Field Length	Data Name	Field Length
AQCR	3	RECORD-0-DAY	3
CITY	4	RECORD-0-YEAR	2
CONTACT	15	SEG-0-ID	1
COUNTY	4	STATE	2
DATE-OF-0-RECORD	5	TELEPHONE	10
ESTABLISHMENT	48	USER-CONTROL-REGION	3
LOCAL-CONTROL	2	USER-PLANT-ID	12
MAILING-ADDRESS	48	UTM-ZONE	2
NUMBER-OF-EMPLOYEES	4		
OWNER	1		
PLANT-ID	8		
PRINCIPAL - PRODUCT	10		
PROPERTY-AREA	6		

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Figure 5.3.2-a. Valid Sort Data Names

Valid Data Names for Sort (Point Data)

Data Name	Field Length	Data Name	Field Length	Data Name	Field Length
ANNUAL-THRUPUT	8	LATITUDE-DEGREE	2	SCHEDULE-MONTH	2
BOILER-DESIGN-CAPACITY	5	LATITUDE-MINUTE	2	SCHEDULE-YEAR	2
COMPLIANCE-SCHEDULE	4	LATITUDE-SECOND	2	SEG-1-ID	1
COMPLIANCE-STATUS	1	LONGITUDE	7	SEP-NOV	2
COMPLIANCE-STATUS-UPDATE	6	LONGITUDE-DEGREE	3	SIC	4
CONTROL-REGULATIONS	12	LONGITUDE-MINUTE	2	SPACE-HEAT	3
DATE-OF-1-RECORD	5	LONGITUDE-SECOND	2	STATUS-DAY	2
DAY-WEEK	1	MAR-MAY	2	STATUS-MONTH	2
DEC-FEB	2	NBR-OF-POLLUTANTS	2	STATUS-YEAR	2
DIAMETER	3	NEDS-POINT-ID	4	TEMPERATURE	4
ECAP	1	NORMAL-OPERATING	5	USER-POINT-ID	3
FLOW-RATE	7	PLUME	4	UTM-COORDINATES	9
HEIGHT	4	POINTS-PER-STACK	4	VELOCITY	5
HORIZONTAL	4	RECORD-1-DAY	3	VERTICAL	5
HOURS-DAY	2	RECORD-1-YEAR	2	WEEK-YEAR	2
IPP	2	REG-1	4		
JUN-AUG	2	REG-2	4		
LATITUDE	6	REG-3	4		

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Figure 5.3.2-a - continued. Valid Sort Data Names

Valid Data Names for Sort (Repeating Point Data)

Data Name	Field Length	Data Name	Field Length
ALLOWABLE	7	ESTIMATION-METHOD	1
CNTL-EQUIP-COST	7	MEASURED	7
CONTROL-EQUIPMENT	6	POLLUTANT-ID	5
EMISSION-UNITS	1	PRIMARY-CNTL	3
EST-CONTROL-EFF	3	SECONDARY-CNTL	3
ESTIMATES	7	TEST-METHOD	1

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Figure 5.3.2-a - continued. Valid Sort Data Names

Valid Data Names for Sort (SCC Data)

Data Name	Field Length	Data Name	Field Length
ASH-CONTENT	3	RECORD-2-DAY	2
BEC	5	SCC	8
BEC-ID	2	SCC-I	1
BEC-NUMBER	3	SCC-II	2
CONFIDENTIALITY	1	SCC-III	3
DATE-OF-2-RECORD	5	SCC-IV	2
EMISSION-FACTOR-SOURCE	1	SCC-SEQ-NBR	2
FUEL-PROCESS-RATE	7	SEG-2-ID	1
FUEL-UNITS	1	SEG-2-POINT-ID	2
HEAT-CONTENT	5	SOURCE-CODE	1
MAX-DESIGN-RATE	7	SOURCE-DESCRIPTION	25
NUMBER-OF-EF	2	SULFUR-CONTENT	3
RECORD-2-YEAR	2		

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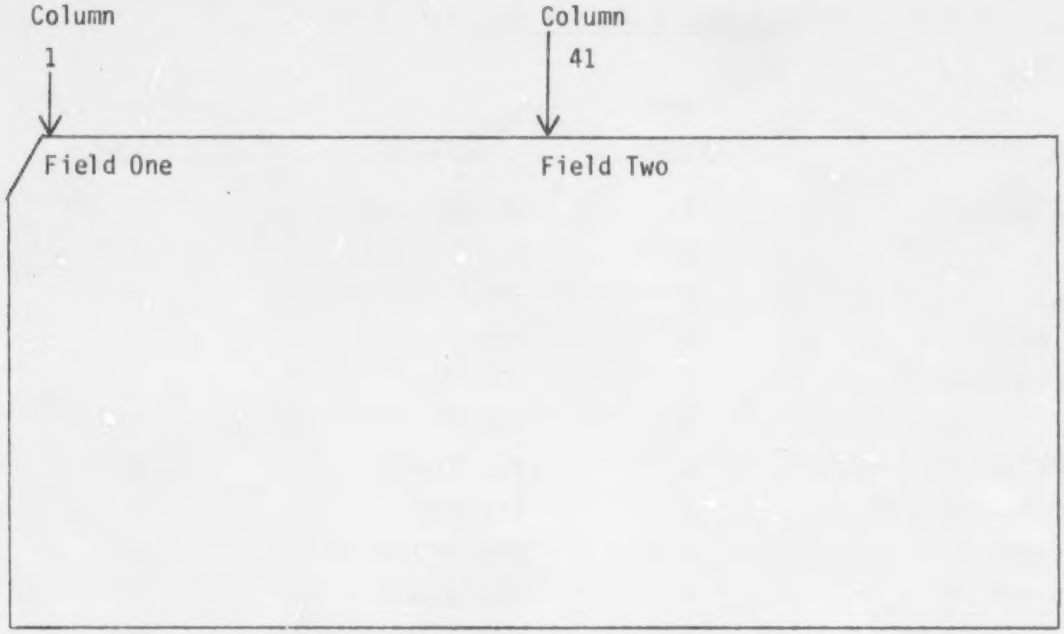
Figure 5.3.2-a - continued. Valid Sort Data Names



Note:

1. The first card in the sort specifications must contain $$SORT in field one.
2. The last card in the sort specifications must contain $$END in field one.
3. The sort request cards must contain a valid data name in field one and a sort sequence code in field two (A for ascending and D for descending).

Figure 5.3.2-b. Sort Specification Cards

```
                    EIS/AS SORT LANGUAGE PROCESSOR PROGRAM  -  DIAGNOSTIC REPORT                    PAGE    1

PROGRAM NAME: PSRLNGP (EP0160)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

INPUT (CONTROL CARDS):

$$SORT

DATE-OF-0-RECORD                 A

STATE                            A

POLLUTANT-ID                     A

$$END

NUMBER OF INPUT CONTROL CARDS:          5
NUMBER OF ERROR MESSAGES:               0
NUMBER OF CONDITIONAL MESSAGES:         0
NUMBER OF WARNING MESSAGES:             0
NUMBER OF ABORT MESSAGES:               0
NUMBER OF DISASTER MESSAGES:            0
```

Figure 5.3.2-c. Diagnostic Report

```
//* EPALM0/A087 HEINGERTEN, LLOYD W. (919) 541-5491                    00000100
//*                                                                    00000200
//*    PROCEDURE NAME: EPSRM10                                         00000300
//*    REVISION LEVEL: 1-00                                            00000400
//*    LAST UPDATE #: P-1                                              00000500
//*    DATE INCORPORATED: FEBRUARY 1, 1980                             00000600
//*                                                                    00000700
//*    THIS PROCEDURE ALLOWS THE USER TO CREATE AND                    00000800
//*    STORE A GENERATED EIS/PS SORT MODULE                            00000900
//*                                                                    00001000
//EPSRM10 PROC PROJECT='CG.EPALM0.A087.CONS.NO.P01',                   00001100
//             PROGRAM=PSRLNGP,                                        00001200
//             PARAM='SIZE=124K,BUF=30K,NOSEQ,SOPMAP,NOSOURCE',        00001300
//             REGION1=100K,                                           00001400
//             TIME1='1,0',                                            00001500
//             TEMP=SYSDA,                                             00001600
//             MEMBER=PSRSKEL,                                         00001700
//             PGMSAVE=RSNDELT,                                        00001800
//             UNIT=A                                                  00001900
//*                                                                    00002000
//COMPILE EXEC PGM=&PROGRAM,                                           00002100
//             REGION=&REGION1,                                        00002200
//             TIME=(&TIME1)                                           00002300
//*                                                                    00002400
//* PRODUCE EIS/PS MASTER FILE SORTER PROGRAM                          00002500
//*                                                                    00002600
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                  00002700
//             VOLUME=(PRIVATE,RETAIN),                                00002800
//             DISP=(SHR,PASS)                                         00002900
//          DD DSNAME=SYS1.COBLIB,                                     00003000
//             DISP=(SHR,PASS)                                         00003100
//*                                                                    00003200
//* INPUT DATA SET - SORTER PROGRAM SKELETON                           00003300
//*                                                                    00003400
//EPSSKEL   DD DSNAME=&PROJECT..SOURCE(&MEMBER),                       00003500
//             VOLUME=(PRIVATE,RETAIN),                                00003600
//             DISP=(SHR,PASS)                                         00003700
//*                                                                    00003800
//* INPUT DATA SET - SORT SPECIFICATION CARDS                          00003900
//*                                                                    00004000
//EPSINPT   DD DDNAME=INPUT,                                           00004100
//             DCB=BLKSIZE=80                                          00004200
//*                                                                    00004300
//* OUTPUT DATA SET - SORTER PROGRAM                                   00004400
//*                                                                    00004500
//EPSPROG   DD UNIT=&TEMP,                                             00004600
//             DISP=(NEW,PASS),                                        00004700
//             SPACE=(TRK,(5,2),RLSE),                                 00004800
//             DSNAME=&&PROGRAM                                        00004900
//*                                                                    00005000
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                              00005100
//*                                                                    00005200
//EPSDIAG   DD SYSOUT=&UNIT                                            00005300
//*                                                                    00005400
//* OUTPUT DATA SETS - SYSTEM OPERATION                                00005500
//*                                                                    00005600
```

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Figure 5.3.2-d. Cataloged Procedure EPSRM10

```
//SYSPRINT  DD SYSOUT=&OUT                                              00005700
//*                                                                     00005800
//SYSOUT    DD SYSOUT=&OUT                                              00005900
//*                                                                     00006000
//SYSDBOUT  DD SYSOUT=&OUT                                              00006100
//*                                                                     00006200
//SYSUTERM  DD SYSOUT=&OUT                                              00006300
//*                                                                     00006400
//SYSUDUMP  DD SYSOUT=&OUT                                              00006500
//*                                                                     00006600
//COBOL    EXEC PGM=IKFCBL00,                                           00006700
//              PARM='&PARAM',                                          00006800
//              REGION=100K,                                            00006900
//              TIME=(2,0)                                              00007000
//*                                                                     00007100
//* COMPILE SORTER PROGRAM                                              00007200
//*                                                                     00007300
//*                                                                     00007400
//* INPUT DATA SET - SOURCE LIBRARY                                     00007500
//*                                                                     00007600
//SYSLIB    DD DSNAME=&PROJECT..SOURCE,                                 00007700
//              VOLUME=(PRIVATE,RETAIN),                                00007800
//              DISP=(SHR,PASS)                                         00007900
//*                                                                     00008000
//* INPUT DATA SET - COBOL SORTER PROGRAM SOURCE CODE                   00008100
//*                                                                     00008200
//SYSIN     DD DSNAME=&&PROGRAM,                                        00008300
//              DISP=(OLD,DELETE)                                       00008400
//*                                                                     00008500
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                               00008600
//*                                                                     00008700
//SYSPRINT  DD SYSOUT=&OUT                                              00008800
//*                                                                     00008900
//* OUTPUT DATA SET - COBOL SORTER PROGRAM OBJECT CODE                  00009000
//*                                                                     00009100
//SYSLIN    DD UNIT=&TEMP,                                              00009200
//              DISP=(NEW,PASS),                                        00009300
//              SPACE=(TRK,(5,2),RLSE),                                 00009400
//              DSNAME=&&OBJECT                                         00009500
//*                                                                     00009600
//* UTILITY DATA SETS                                                   00009700
//*                                                                     00009800
//SYSUT1    DD UNIT=&TEMP,                                              00009900
//              SPACE=(TRK,(50,100))                                    00010000
//*                                                                     00010100
//SYSUT2    DD UNIT=(&TEMP,SEP=SYSUT1),                                 00010200
//              SPACE=(TRK,(50,100))                                    00010300
//*                                                                     00010400
//SYSUT3    DD UNIT=(&TEMP,SEP=(SYSUT1,SYSUT2)),                        00010500
//              SPACE=(TRK,(50,100))                                    00010600
//*                                                                     00010700
//SYSUT4    DD UNIT=(&TEMP,SEP=(SYSUT1,SYSUT2,SYSUT3)),                 00010800
//              SPACE=(TRK,(50,100))                                    00010900
//*                                                                     00011000
//LKED     EXEC PGM=IEWL,                                               00011100
//              PARM='LIST,LET,XREF',                                   00011200
```

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Figure 5.3.2-d - continued. Cataloged Procedure EPSRM10

```
//             COND=(5,LT,COBOL),                                    00011300
//             REGION=100K,                                          00011400
//             TIME=(1,0)                                            00011500
//*                                                                  00011600
//* LINK-EDIT SORTER                                                 00011700
//*                                                                  00011800
//*                                                                  00011900
//* INPUT DATA SET - AUTO-CALL LIBRARY                               00012000
//SYSLIB     DD DSNAME=&PROJECT..LOAD,                               00012100
//             VOLUME=(PRIVATE,RETAIN),                              00012200
//             DISP=(SHR,PASS)                                       00012300
//           DD DSNAME=SYS1.COBLIB,                                  00012400
//             DISP=(SHR,PASS)                                       00012500
//*                                                                  00012600
//* INPUT DATA SET - COBOL SORTER PROGRAM OBJECT CODE                00012700
//*                                                                  00012800
//SYSLIN     DD DSNAME=&&OBJMOD,                                     00012900
//             DISP=(OLD,DELETE)                                     00013000
//           DD DDNAME=INPUT,                                        00013100
//             DCB=BLKSIZE=80                                        00013200
//*                                                                  00013300
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                            00013400
//*                                                                  00013500
//SYSPRINT   DD SYSOUT=&OUT                                          00013600
//*                                                                  00013700
//* OUTPUT DATA SET - COBOL SORTER PROGRAM LOAD MODULE               00013800
//*                                                                  00013900
//SYSLMOD    DD VOLUME=(PRIVATE,RETAIN),                             00014000
//             DISP=(OLD,PASS),                                      00014100
//             DSNAME=&PROJECT..LOAD(&PGMSAVE)                       00014200
//*                                                                  00014300
//* UTILITY DATA SET                                                 00014400
//*                                                                  00014500
//SYSUT1     DD UNIT=&TEMP,                                          00014600
//             SPACE=(TRK,(10,5))                                    00014700
//*                                                                  00014800
```

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Figure 5.3.2-d - continued. Cataloged Procedure EPSRM10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA. EPMASTR would be the full data set name of an EIS/PS master file)
PROGRAM	PSRLNGP	Sort language processor program
TEMP	SYSDA	Unit type for temporary work space
PGMSAVE	PSRDFLT	Output load module member name
MEMBER	PSRSKEL	Retrieval program skeleton
OUT	A	SYSOUT class for all print files
REGION1	100K	Region size allocated for execution of PSRLNGP
TIME1	'1,0'	Time allocated for execution of PSRLNGP
PARAM	'SIZE=94K, BUF=10K, NOSEQ, SUPMAP, NOSOURCE'	Parameters used for compiler

Figure 5.3.2-e. Substitutable Parameters for EPSRM10

5.3.3. GENERATED SORT PROGRAM - PSRGENR (EP0170)

5.3.3.1. Description

PSRGENR (EP0170), the generated sort program, is the second of two EIS/PS programs used to sort data from the EIS/PS master file. The sort language processor program, PSRLNGP (EP0160), generates PSRGENR (EP0170) and must, therefore, be executed first. All sort requests are specified on sort specification cards input to PSRLNGP (EP0160) (see Section 5.3.2.2).

The sort process can be performed two ways. The first is to execute the cataloged procedure EPSRM30 (see Section 5.5.3). This procedure executes PSRLNGP (EP0160) and compiles, link edits, and executes PSRGENR (EP0170); PSRGENR (EP0170) is not saved. The second method allows the generated sort program to be saved for future runs (on other EIS/PS master files). Two cataloged procedures are used in this method; they can be run together in one job stream or at different times. The first of these procedures, EPSRM10, executes PSRLNGP (EP0160) and compiles, link edits, and saves the generated sort load module (see Section 5.3.2.5). The second procedure, EPSRM20, executes the stored sort load module (see Section 5.3.3.5). This load module corresponds to PSRGENR (EP0170), but a different name should be used so that more than one sort can be stored.

For further discussion of the EIS/PS sort specifications, see Section 5.3.2.2.

5.3.3.2. File Formats

PSRGENR (EP0170) uses one input file, the EIS/PS master file (or an answer file). See Figure 4.3.9-a for the master file format.

There are two files which are output from PSRGENR (EP0170): a sorted answer file and a diagnostic report. The answer file has the same format as the EIS/PS master file; however, there may be duplicate records. See Figure 5.3.3-a for an example of the diagnostic report.

5.3.3.3. Options and Control Cards

There is no option card input to PSRGENR (EP0170).

5.3.3.4. Error Messages

PSRGENR 001 ERROR - MASTER FILE CONTAINS NO RECORDS

Meaning: The input master file was empty. This may have been caused by using an answer file from retrieval in which the specifications were in error or specified criteria which no records could meet.

Action: If a previous retrieval was in error, correct the specifications and resubmit both jobs. Otherwise, verify that the correct EIS/PS master file was used.

PSRGENR 002 ERROR - SORTED FILE CONTAINS NO RECORDS

Meaning: This error message should be accompanied by message PSRGENR 001. See the explanation above.

Action: See PSRGENR 001 if that message is also present; if not, contact NADB.

PSRGENR 003 ERROR - UNKNOWN RECORD FOUND, RECORD IGNORED

Meaning: A record type other than 0, 1, 2, or 3 was encountered. This message is accompanied by message PSRGENR 004, which gives key information for the record in error.

Action: Verify that a correct EIS/PS master (or answer) file was used as input. If not, enter the correct file and resubmit; otherwise, the file has a serious problem and NADB should be contacted.

PSRGENR 004 KEY = XXXXXXXXXXXXX, DATE = XXXXX, SEG-ID = XXX

Meaning: This message accompanies message PSRGENR 003 and indicates the record in error.

Action: See PSRGENR 003.

5.3.3.5. Cataloged JCL

The cataloged procedure EPSRM20 executes a stored generated sort load module and produces a sorted answer file. This load module must have first been created and stored using the cataloged procedure EPSRM10. For information on EPSRM10, see Section 5.3.2.5.

5.3.3.5.1 JCL listing - Figure 5.3.3-b contains a listing of the cataloged procedure EPSRM20, which executes the program PSRGENR (EP0170).

5.3.3.5.2 Cross-reference of DD names and files

Program Name: PSRGENR (EP0170)

DD Name	File Description	Input/Output
EPSMSTR	EIS/PS master file	Input
EPSANSR	Sorted answer file	Output

EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work file	Internal

5.3.3.5.3 User-supplied JCL - To execute the cataloged procedure EPSRM20, the user must supply job accounting information, data set names of the EIS/PS master file, the sorted answer file, and the stored sort load module. See Figure 5.3.3-c for a description of the procedure's substitutable parameters.

5.3.3.5.4 Sample run stream - The following run stream uses the procedure EPSRM20 to execute the sort load module PSRGEN1. PSRGEN1 was created and stored by the procedure EPSRM10 (see Section 5.3.2.5.4 for the run stream) and will sort by POLLUTANT-ID. The master file is 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMMSTR', and the answer file is 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPSORT1'.

```
//   EXEC    EPSRM20,
//           PROGRAM=PSRGEN1,
//           MSTRFIL=EPMMSTR,
//           ANSRFIL=EPSORT1
```

5.3.3.6 Warnings and Special Instructions

If PSRLNGP (EP0160) is run and encounters an ABORT error, PSRGENR (EP0170) will be executed (if it follows in the run stream) but will not produce a valid answer file. When this occurs, correct the error from PSRLNGP (EP0160) and resubmit the job.

The sort language processor program, PSRLNGP (EP0160), must always be run prior to running the generated sort program, PSRGENR (EP0170). The two programs can be run together using the procedure EPSRM30; or the generated sort module can be stored and run at a later date, using procedures EPSRM10 and EPSRM20.

The sorted answer file is only a subset of the master file; no comment records are included. There may also be a large number of duplicate records. See Section 5.3.2 for a discussion of the records in the sorted answer file. The sorted file should only be used for the master file summary report program, PRPMSUM (EP0240).

5.3.3.7. Cost Considerations

The following estimates are for the execution, on an IBM 370/168, of the sample run stream shown in Section 5.3.3.5.4 and illustrate the cost of executing EPSRM20.

Size of EIS/PS master file: 162 records
Size of answer file: 779 records
CPU time: 4.09 second
I/O time: 29.14 seconds
Total time: 33.23 seconds

Estimated cost: $4.65

5.3.3.8. Related Programs and Procedures

The cataloged procedure EPSRM30 should be used to perform one-time sorts. It executes the sort language processor program, PSRLNGP (EP0160), and compiles, link edits, and executes the generated sort program, PSRGENR (EP0170). After the sort has been completed, the generated sort program is deleted. For additional information on EPSRM30, see Section 5.5.3.

```
                    EIS/PS GENERATED SORT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE    1

PROGRAM NAME: PSRGENR (EP0170)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF MASTER FILE RECORDS READ:            162
NUMBER OF SEGMENT 1 RECORDS SKIPPED:             8
NUMBER OF SORTED FILE RECORDS WRITTEN:         779
NUMBER OF ERRORS DETECTED:                       0
```

Figure 5.3.3-a. Diagnostic Report

```
//* EPALM0/A087 HEDGEPETH, LLOYD A. (919) 541-5491
//*
//*    PROCEDURE NAME: EPSRM20
//*    REVISION LEVEL: 1-00
//*    LAST UPDATE #: P-1
//*    DATE INCORPORATED: FEBRUARY 1, 1980
//*
//*    THIS PROCEDURE ALLOWS THE USER TO
//*    EXECUTE A STORED EIS/PS SORT MODULE
//*
//EPSRM20 PROC PROJECT='CU.EPALM.A087.COBS.M0.F.T',
//             PROGRAM=PSRDFLT,
//             TEMP=SYSDA,
//             MSTRFIL=EPMASTR,
//             SORTFIL=EPSRTFL,
//             REGION2=100K,
//             TIME2='3,0',
//             UNIT=3330,
//             SERIAL=COMSPK,
//             DISP='NEW,CATLG,DELETE',
//             SECUNIT=TRK,
//             PRIMARY=20,
//             SECONDRY=10,
//             SORTSPC=50,
//             OUT=A
//*
//SORT     EXEC PGM=&PROGRAM,
//             REGION=&REGION2,
//             TIME=(&TIME2)
//*
//* SORT EIS/PS MASTER FILE
//*
//STEPLIB   DD DSNAME=&PROJECT..LOAD,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//          DD DSNAME=SYS1.COBLIB,
//             DISP=(SHR,PASS)
//*
//* INPUT DATA SET - EIS/PS MASTER FILE
//*
//EPSMSTR   DD DSNAME=&PROJECT..DATA.&MSTRFIL,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//*
//* OUTPUT DATA SET - SORTED FILE
//*
//EPSRTSR   DD UNIT=&UNIT,
//             VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),
//             DISP=(&DISP),
//             SPACE=(&SECUNIT,(&PRIMARY,&SECONDRY),RLSE),
//             DSNAME=&PROJECT..DATA.&SORTFIL
//*
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES
//*
//EPSDIAG   DD SYSOUT=&OUT
//*
```

(Page 1 of 2)

Figure 5.3.3-b. Cataloged Procedure EPSRM20

```
//* SORT/MERGE DATA SETS                                                 00005700
//*                                                                      00005800
//SORTLIB   DD DSNAME=SYS1.SORTLIB,                                      00005900
//             DISP=(SHR,PASS)                                           00006000
//*                                                                      00006100
//SORTWK01  DD UNIT=&TEMP,                                               00006200
//             SPACE=(CYL,&SORTSPC,,CONTIG)                              00006300
//*                                                                      00006400
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),                                00006500
//             SPACE=(CYL,&SORTSPC,,CONTIG)                              00006600
//*                                                                      00006700
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                     00006800
//             SPACE=(CYL,&SORTSPC,,CONTIG)                              00006900
//*                                                                      00007000
//* OUTPUT DATA SETS - SYSTEM OPERATION                                  00007100
//*                                                                      00007200
//SYSPRINT  DD SYSOUT=&OUT                                               00007300
//*                                                                      00007400
//SYSOUT    DD SYSOUT=&OUT                                               00007500
//*                                                                      00007600
//SYSDBOUT  DD SYSOUT=&OUT                                               00007700
//*                                                                      00007800
//SYSDTERM  DD SYSOUT=&OUT                                               00007900
//*                                                                      00008000
//SYSUDUMP  DD SYSOUT=&OUT                                               00008100
//*                                                                      00008200
```

(Page 2 of 2)

Figure 5.3.3-b - continued. Cataloged Procedure EPSRM20

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087.CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMASTER would be the full data set name of an EIS/PS master file)
PROGRAM	PSRDFLT	Stored sort load module (created by EPSRM10)
TIME2	'1,0'	Time allocated for execution of sort
MSTRFIL	EPMASTR	Lowest-level index of master file
ANSRFIL	EPSRTFL	Lowest-level index of sorted answer file
UNIT	3330	Unit type upon which the sorted answer file is to reside
SERIAL	CDHSPK	Volume serial number of volume to which sorted answer file is to be written
DISP	'NEW,CATLG,DELETE'	Disposition of sorted answer file
SPCUNIT	TRK	Units in which space for sorted answer file is to be allocated
PRIMARY	20	Primary space allocation for sorted answer file
SECNDRY	10	Secondary space allocation for sorted answer file
OUT	A	SYSOUT class for all print files
SORTSPC	50	Work space used for sort work files

Figure 5.3.3-c. Substitutable Parameters for EPSRM20

5.4. MISCELLANEOUS

5.4.1. INTRODUCTION

The internal transaction file concatenation program, PMSTCON (EP0190), allows the user to concatenate two internal transaction files. The resulting output file must be sorted prior to its use in other EIS/PS programs. See Figure 5.4.1-a for a flowchart of PMSTCON (EP0190).

Detailed information on PMSTCON (EP0190) can be found in Section 5.4.2.

The cataloged procedure EPMST20 executes PMSTCON (EP0190). See Section 5.4.2.5 for further information on EPMST20.

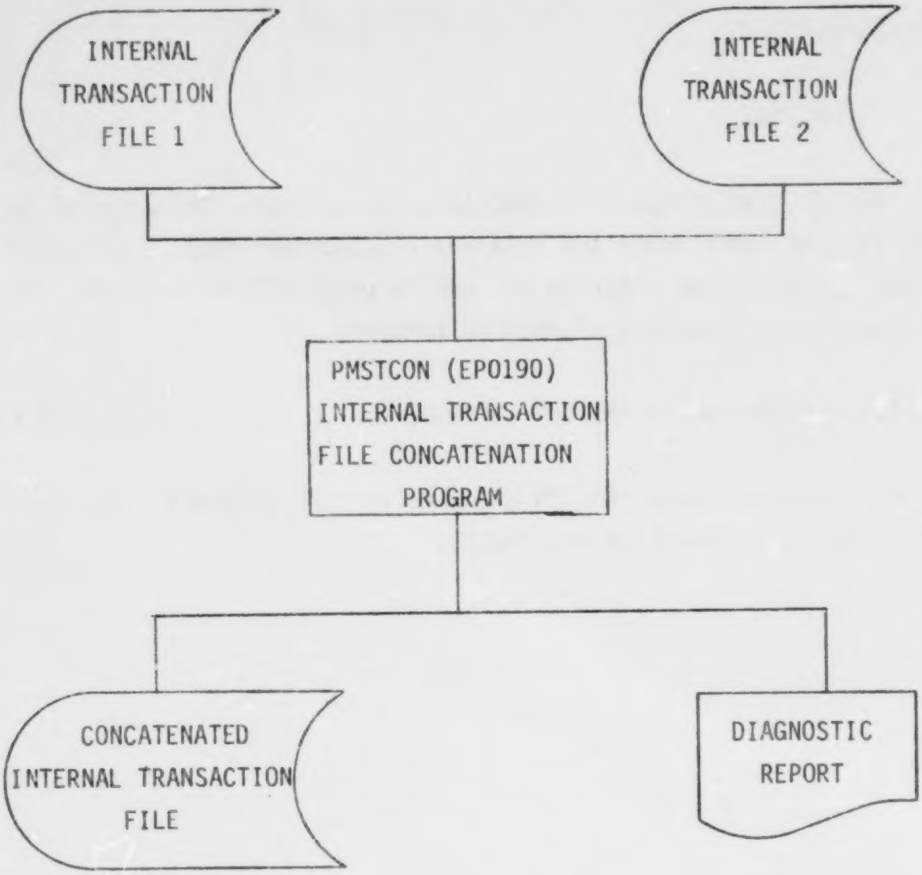

INTERNAL TRANSACTION FILE 1
INTERNAL TRANSACTION FILE 2
PMSTCON (EP0190) INTERNAL TRANSACTION FILE CONCATENATION PROGRAM
CONCATENATED INTERNAL TRANSACTION FILE
DIAGNOSTIC REPORT

Figure 5.4.1-a. Internal Transaction File Concatenation Flowchart

5.4.2 INTERNAL TRANSACTION FILE CONCATENATION PROGRAM - PMSTCON (EP0190)

5.4.2.1 Description

PMSTCON (EP0190) concatenates two distinct EIS/PS internal transaction files into a single EIS/PS internal transaction file. See Section 4.3.5 for additional information on the internal transactions.

5.4.2.2 File Formats

The input to PMSTCON (EP0190) consists of two separate internal transaction files. See Figure 4.3.5-c for the internal transaction format.

PMSTCON (EP0190) produces a single internal transaction file and a diagnostic report. The diagnostic report consists of the update messages and the input and output file record counts. A sample of the diagnostic report is shown in Figure 5.4.2-a.

5.4.2.3 Options and Control Cards

There are no options.

5.4.2.4 Error Messages

There are no error messages.

5.4.2.5 Cataloged JCL

5.4.2.5.1 JCL listing - PMSTCON (EP0190) can be run by executing the cataloged procedure EPMST20. See Figure 5.4.2-b for a listing of this procedure.

5.4.2.5.2 Cross-reference of DD names and files

Program Name: PMSTCON (EP0190)

DD Name	File Description	Input/Output
EPSTRNA	Input internal transaction file #1	Input
EPSTRNB	Input internal transaction file #2	Input
EPSCONC	Concatenated internal transaction file	Output
EPSDIAG	Diagnostic report	Output

5.4.2.5.3 User-supplied JCL - The user must specify the data set names of the input and output internal transaction files. See Figure 5.4.2-c for a description of the procedure's substitutable parameters.

5.4.2.5.4 Sample run stream - The following run stream would produce the internal transaction file 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPINTERN' from the input internal transaction files 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPINTRN1' and 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPINTRN2':

```
// EXEC EPMST20,
//      INTRN1=EPINTRN1,
//      INTRN2=EPINTRN2,
//      CONCAT=EPINTERN
```

5.4.2.6 Warnings and Special Instructions

There are no warnings or special instructions.

5.4.2.7 Cost Considerations

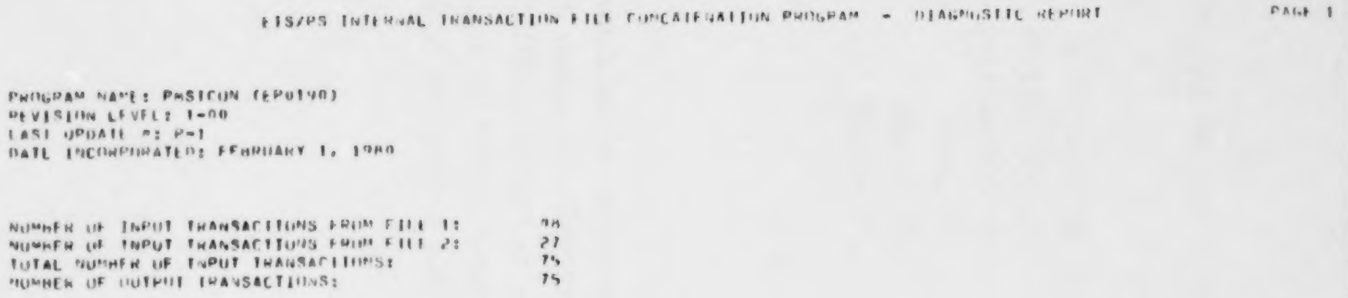
The following estimates are for the execution of PMSTCON (EP0190) on an IBM 370/168:

Input internal transaction file #1: 46 transactions
Input internal transaction file #2: 27 transactions
Concatenated internal transaction file: 75 transactions
CPU time: .25 second
I/O time: .45 seconds
Total time: .70 seconds

Estimated Cost: $.10

5.4.2.8 Related Programs and Procedures

The internal transaction file produced by executing the cataloged procedure EPMST20 can be used as input to PSREFIN (EP0090), the master file internal transaction pre-insertion sort program, or to PSRINTR (EP0110), the master file internal transaction sort program. Refer to Section 4.3.6 for a description of PSREFIN (EP0090) and to Section 4.3.8 for PSRINTR (EP0110).



```
                        EIS/PS INTERNAL TRANSACTION FILE CONCATENATION PROGRAM  -  DIAGNOSTIC REPORT              PAGE 1

PROGRAM NAME: PMSTCON (EP0190)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS FROM FILE 1:          48
NUMBER OF INPUT TRANSACTIONS FROM FILE 2:          27
TOTAL NUMBER OF INPUT TRANSACTIONS:                75
NUMBER OF OUTPUT TRANSACTIONS:                     75
```

Figure 5.4.2-a. Diagnostic Report

```
//* EPALMH/A087 HEDGEPETH, LLOYD M. (919) 541-5491                       00000100
//*                                                                      00000200
//*    PROCEDURE NAME: EPMST20                                           00000300
//*    REVISION LEVEL: 1-00                                              00000400
//*    LAST UPDATE #: P-1                                                00000500
//*    DATE INCORPORATED: FEBRUARY 1, 1980                               00000600
//*                                                                      00000700
//*    THIS PROCEDURE ALLOWS THE USER TO CONCATENATE TWO EIS/PS          00000800
//*    INTERNAL TRANSACTION FILES                                        00000900
//*                                                                      00001000
//*                                                                      00001100
//EPMST20 PROC PROJECT='CO.EPALMH.A087.CDHS.NW.PNT',                     00001200
//             PROGRAM=PMSTCON,                                          00001300
//             REGION1=64K,                                              00001400
//             TIME1='1,0',                                              00001500
//             INTRN1=EPINTRN1,                                          00001600
//             INTRN2=EPINTRN2,                                          00001700
//             CONCAT=EPINTERN,                                          00001800
//             UNIT=3330,                                                00001900
//             SERIAL=CDHSPK,                                            00002000
//             DISP='NEW,CATLG,DELETE',                                  00002100
//             SPCUNIT=TRK,                                              00002200
//             PRIMARY=20,                                               00002300
//             SECNDRY=10,                                               00002400
//             OUT=A                                                     00002500
//*                                                                      00002600
//CONCAT   EXEC PGM=&PROGRAM,                                            00002700
//             REGION=&REGION1,                                          00002800
//             TIME=(&TIME1)                                             00002900
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                                   00003000
//             VOLUME=(PRIVATE,RETAIN),                                  00003100
//             DISP=(SHR,PASS)                                           00003200
//*                                                                      00003300
//* INPUT DATA SET - INTERNAL TRANSACTION FILE 1                         00003400
//*                                                                      00003500
//EPSTRNA    DD DSNAME=&PROJECT..DATA.&INTRN1,                           00003600
//             VOLUME=(PRIVATE,RETAIN),                                  00003700
//             DISP=(SHR,PASS)                                           00003800
//*                                                                      00003900
//* INPUT DATA SET - INTERNAL TRANSACTION FILE 2                         00004000
//*                                                                      00004100
//EPSTRNB    DD DSNAME=&PROJECT..DATA.&INTRN2,                           00004200
//             VOLUME=(PRIVATE,RETAIN),                                  00004300
//             DISP=(SHR,PASS)                                           00004400
//*                                                                      00004500
//* OUTPUT DATA SET - CONCATENATED INTERNAL TRANSACTION FILE             00004600
//*                                                                      00004700
//EPSCONC    DD DSNAME=&PROJECT..DATA.&CONCAT,                           00004800
//             UNIT=&UNIT,                                               00004900
//             VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                      00005000
//             DISP=(&DISP),                                             00005100
//             SPACE=(&SPCUNIT,(&PRIMARY,&SECNDRY),RLSE)                 00005200
//*                                                                      00005300
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                  00005400
//*                                                                      00005500
//EPSDIAG    DD SYSOUT=&OUT                                              00005600
```

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Figure 5.4.2-b. Cataloged Procedure EPMST20

```
//*                                                              00005700
//* OUTPUT DATA SETS - SYSTEM OPERATION                          00005800
//*                                                              00005900
//SYSPRINT  DD SYSOUT=&OUT                                       00006000
//*                                                              00006100
//SYSOUT    DD SYSOUT=&OUT                                       00006200
//*                                                              00006300
//SYSDBOUT  DD SYSOUT=&OUT                                       00006400
//*                                                              00006500
//SYSUTERM  DD SYSOUT=&OUT                                       00006600
//*                                                              00006700
//SYSUDUMP  DD SYSOUT=&OUT                                       00006800
//*                                                              00006900
```

(Page 2 of 2)

Figure 5.4.2-b - continued. Cataloged Procedure EPMST20

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA. EPINTERN would be the full data set name of an EIS/PS internal transaction file)
PROGRAM	PMSTCON	Internal transaction file concatenation program
REGION1	64K	Region size allocated for execution of PMSTCON (EP0190)
TIME1	'1,0'	Time allocated for execution of PMSTCON (EP0190)
INTRN1	EPINTRN1	Lowest-level index of input internal transaction file #1
INTRN2	EPINTRN2	Lowest-level index of input internal transaction file #2
CONCAT	EPINTERN	Lowest level index of concatenated internal transaction file
UNIT	3330	Unit type to which concatenated internal transaction file is to be written
SERIAL	CDHSPK	Volume ID to which concatenated internal transaction file is to be written
DISP	'NEW,CATLG,DELETE'	Disposition of concatenated internal transaction file

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Figure 5.4.2-c. Substitutable Parameters for EPMST20

Parameter Name	Default Value	Description
SPCUNIT	TRK	Units in which space for concatenated internal transaction file is to be allocated
PRIMARY	20	Primary space allocation for concatenated internal transaction file
SECNDRY	10	Secondary space allocation for concatenated internal transaction file
OUT	A	SYSOUT class for all print files

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Figure 5.4.2-c - continued. Substitutable Parameters for EPMST20

5.5. MULTI-PROGRAM PROCEDURES

5.5.1. INTRODUCTION

The cataloged procedures EPRTM30 and EPSRM30 allow the user to execute the retrieval and sort generation functions without saving the generated programs.

The cataloged procedure EPRTM30 executes the retrieval language processor program, PRTLNGP (EP0140), and the generated retrieval program, PRTGENR (EP0150).

The sort language processor program, PSRLNGP (EP0160), and the generated sort program, PSRGENR (EP0170), are executed by EPSRM30.

Refer to Sections 5.5.2 and 5.5.3 for information on EPRTM30 and EPSRM30, respectively.

5.5.2 RETRIEVAL - EPRTM30

5.5.2.1 Description

The cataloged procedure EPRTM30 executes the retrieval language processor program, PRTLNGP (EP0140), and compiles, link edits, and executes the generated retrieval program, PRTGENR (EP0150). The load module for the generated retrieval program is not saved. For information on the cataloged procedure EPRTM10, which executes the retrieval language processor program and compiles, link edits, and saves the generated retrieval load module, see Section 5.2.2.5. Information on the cataloged procedure EPRTM20, which executes the retrieval load module stored by EPRTM10, can be found in Section 5.2.3.5. Information on PRTLNGP (EP0140) and PRTGENR (EP0150) can be found in Section 5.2.

5.5.2.2 JCL Listing

Figure 5.5.2-a contains a listing of the cataloged procedure EPRTM30.

5.5.2.3 Cross-reference of DD Names and Files

Program Name: PRTLNGP (EP0090)

DD Name	File Description	Input/Output
EPSSKEL	Retrieval skeleton program	Input
EPSINPT	Retrieval specification cards	Input
EPSPROG	Retrieval source program	Output
EPSDIAG	Diagnostic report	Output

Program Name: PRTGENR (EP0150)

DD Name	File Description	Input/Output
EPSMSTR	EIS/PS master file	Input
EPSANSR	Retrieved answer file	Output
EPSDIAG	Diagnostic report	Output

5.5.2.4 User-supplied JCL

To execute the cataloged procedure EPRTM30, the user must supply job accounting information and the data set names of the EIS/PS master file and the answer file. See Figure 5.5.2-b for a description of the procedure's substitutable parameters. The retrieval specification cards must also be supplied.

5.5.2.5 Sample Run Stream

The following run stream uses the cataloged procedure EPRTM30. The input EIS/PS master file is 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMASTR1' and the output answer file is 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.ANSWR1'. The answer file is to be cataloged so that it can be used in later runs. All records for county '0218' will be retrieved.

```
// EXEC  EPRTM30,
//       MSTRFIL=EPMASTR1,
//       ANSWRFL=ANSWR1,
//       DISP='NEW,CATLG,DELETE'
//COMPILE.INPUT DD *
$$SELECT
COUNTY                   = '0218'
$$END
/*
```

```
//*                                                                     00000100
//*    PROCEDURE NAME: EPRTM30                                          00000200
//*    REVISION LEVEL: 1-00                                             00000300
//*    LAST UPDATE #: P-1                                               00000400
//*    DATE INCORPORATED: FEBRUARY 1, 1980                              00000500
//*                                                                     00000600
//*    THIS PROCEDURE ALLOWS THE USER TO CREATE                         00000700
//*    AND EXECUTE EIS/PS RETRIEVALS                                    00000800
//*                                                                     00000900
//EPRTM30 PROC PROJECT='CN.EPALMH.A087.CD45.NU.P41',                    00001000
//             PROGRAM=PRTLGGP,                                         00001100
//             PARM='SIZE=124K,BUF=50K,NOSEQ,SUPMAP,NOSOURCE',          00001200
//             TEMP=SYSDA,                                              00001300
//             REGION1=60K,                                             00001400
//             REGION2=100K,                                            00001500
//             TIME1='1,0',                                             00001600
//             TIME2='5,0',                                             00001700
//             MSTRFIL=EPMASTER,                                        00001800
//             ANSWREL=EPANSREL,                                        00001900
//             UNIT=3330,                                               00002000
//             SERIAL=CDHSPK,                                           00002100
//             DISP='NEW,CATLG,DELETE',                                 00002200
//             SPCUNIT=TRK,                                             00002300
//             PRIMARY=20,                                              00002400
//             SECONDRY=10,                                             00002500
//             MEMBER=PRTSKEL,                                          00002600
//             OUT=A                                                    00002700
//*                                                                     00002800
//COMPILE EXEC PGM=&PROGRAM,                                            00002900
//             REGION=&REGION1,                                         00003000
//             TIME=(&TIME1)                                            00003100
//*                                                                     00003200
//* PRODUCE EIS/PS RETRIEVAL PROGRAM                                    00003300
//*                                                                     00003400
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00003500
//             VOLUME=(PRIVATE,RETAIN),                                 00003600
//             DISP=(SHR,PASS)                                          00003700
//          DD DSNAME=SYS1.COBLIB,                                      00003800
//             DISP=(SHR,PASS)                                          00003900
//*                                                                     00004000
//* INPUT DATA SET - RETRIEVAL PROGRAM SKELETON                         00004100
//*                                                                     00004200
//EPSSKEL   DD DSNAME=&PROJECT..SOURCE(&MEMBER),                        00004300
//             VOLUME=(PRIVATE,RETAIN),                                 00004400
//             DISP=(SHR,PASS)                                          00004500
//*                                                                     00004600
//* INPUT DATA SET - RETRIEVAL SPECIFICATION CARDS                      00004700
//*                                                                     00004800
//EPSINPT   DD DDNAME=INPUT,                                            00004900
//             DCB=BLKSIZE=80                                           00005000
//*                                                                     00005100
//* OUTPUT DATA SET - RETRIEVAL PROGRAM                                 00005200
//*                                                                     00005300
//EPSPROG   DD UNIT=&TEMP,                                              00005400
//             DISP=(NEW,PASS),                                         00005500
//              SPACE=(TRK,(5,2),RLSE),                                 00005600
```

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Figure 5.5.2-a. Cataloged Procedure EPRTM30

```
//             DSNAME=&&PROGRAM                                         00005700
//*                                                                     00005800
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                               00005900
//*                                                                     00006000
//EPSDIAG   DD SYSOUT=&OUT                                              00006100
//*                                                                     00006200
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00006300
//*                                                                     00006400
//SYSPRINT  DD SYSOUT=&OUT                                              00006500
//*                                                                     00006600
//SYSOUT    DD SYSOUT=&OUT                                              00006700
//*                                                                     00006800
//SYSDBOUT  DD SYSOUT=&OUT                                              00006900
//*                                                                     00007000
//SYSDTERM  DD SYSOUT=&OUT                                              00007100
//*                                                                     00007200
//SYSUDUMP  DD SYSOUT=&OUT                                              00007300
//*                                                                     00007400
//COBOL   EXEC PGM=IKFCBL00,                                            00007500
//             PARM='&PARAM',                                           00007600
//             REGION=100K,                                             00007700
//             TIME=(2,0)                                               00007800
//*                                                                     00007900
//* COMPILE RETRIEVAL PROGRAM                                           00008000
//*                                                                     00008100
//*                                                                     00008200
//* INPUT DATA SET - SOURCE LIBRARY                                     00008300
//*                                                                     00008400
//SYSLIB    DD DSNAME=&PROJECT..SOURCE,                                 00008500
//             VOLUME=(PRIVATE,RETAIN),                                 00008600
//             DISP=(SHR,PASS)                                          00008700
//*                                                                     00008800
//* INPUT DATA SET - COBOL RETRIEVAL PROGRAM SOURCE CODE                00008900
//*                                                                     00009000
//SYSIN     DD DSNAME=&&PROGRAM,                                        00009100
//             DISP=(OLD,DELETE)                                        00009200
//*                                                                     00009300
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                               00009400
//*                                                                     00009500
//SYSPRINT  DD SYSOUT=&OUT                                              00009600
//*                                                                     00009700
//* OUTPUT DATA SET - COBOL RETRIEVAL PROGRAM OBJECT CODE               00009800
//*                                                                     00009900
//SYSLIN    DD UNIT=&TEMP,                                              00010000
//             DISP=(NEW,PASS),                                         00010100
//             SPACE=(TRK,(5,2),RLSE),                                  00010200
//             DSNAME=&&OBJMOD                                          00010300
//*                                                                     00010400
//* UTILITY DATA SETS                                                   00010500
//*                                                                     00010600
//SYSUT1    DD UNIT=&TEMP,                                              00010700
//             SPACE=(TRK,(50,100))                                     00010800
//*                                                                     00010900
//SYSUT2    DD UNIT=(&TEMP,SEP=SYSUT1),                                 00011000
//             SPACE=(TRK,(50,100))                                     00011100
//*                                                                     00011200
```

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Figure 5.5.2-a - continued. Cataloged Procedure EPRTM30

```
//SYSUT3     DD UNIT=(&TEMP,SEP=(SYSUT1,SYSUT2)),
//              SPACE=(TRK,(50,100))
//*
//SYSUT4     DD UNIT=(&TEMP,SEP=(SYSUT1,SYSUT2,SYSUT3)),
//              SPACE=(TRK,(50,100))
//*
//LKED     EXEC PGM=IEWL,
//              PARM='LIST,LET,XREF',
//              COND=(5,LT,COBOL),
//              REGION=100K,
//              TIME=(1,0)
//*
//* LINK-EDIT RETRIEVAL
//*
//*
//* INPUT DATA SET - AUTO-CALL LIBRARY
//SYSLIB     DD DSNAME=&PROJECT..LOAD,
//              VOLUME=(PRIVATE,RETAIN),
//              DISP=(SHR,PASS)
//           DD DSNAME=SYS1.COBLIB,
//              DISP=(SHR,PASS)
//*
//* INPUT DATA SET - COBOL RETRIEVAL PROGRAM OBJECT CODE
//*
//SYSLIN     DD DSNAME=&&OBJMOD,
//              DISP=(OLD,DELETE)
//           DD DDNAME=INPUT,
//              DCB=BLKSIZE=80
//*
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES
//*
//SYSPRINT   DD SYSOUT=&OUT
//*
//* OUTPUT DATA SET - COBOL RETRIEVAL PROGRAM LOAD MODULE
//*
//SYSLMOD    DD UNIT=&TEMP,
//              DISP=(MOD,PASS),
//              SPACE=(TRK,(10,5,1)),
//              DSNAME=&&LOADMOD(RETRIEVE)
//*
//* UTILITY DATA SET
//*
//SYSUT1     DD UNIT=&TEMP,
//              SPACE=(TRK,(10,5))
//*
//RETRIEVE EXEC PGM=*.LKED.SYSLMOD,
//              COND=((5,LT,COBOL),(5,LT,LKED)),
//              REGION=&REGION2,
//              TIME=(&TIME2)
//*
//* RETRIEVE ANSWER FILE FROM EIS/PS MASTER FILE
//*
//STEPLIB    DD DSNAME=&PROJECT..LOAD,
//              VOLUME=(PRIVATE,RETAIN),
//              DISP=(SHR,PASS)
//           DD DSNAME=SYS1.COBLIB,
```

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Figure 5.5.2-a - continued. Cataloged Procedure EPRTM30

```
//                 DISP=(SHR,PASS)                                             00016900
//*                                                                            00017000
//* INPUT DATA SET - EIS/PS MASTER FILE                                        00017100
//*                                                                            00017200
//EPSMSTR    DD DSNAME=&PROJECT..DATA.&MSTRFIL,                                00017300
//                 VOLUME=(PRIVATE,RETAIN),                                    00017400
//                 DISP=(SHR,PASS)                                             00017500
//*                                                                            00017600
//* OUTPUT DATA SET - ANSWER FILE                                              00017700
//*                                                                            00017800
//EPSANSR    DD UNIT=&UNIT,                                                    00017900
//                 VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                        00018000
//                 DISP=(&DISP),                                               00018100
//                 SPACE=(&SPCUNIT,(&PRIMARY,&SECONDRY),RLSE),                 00018200
//                 DSNAME=&PROJECT..DATA.&ANSWRFL                              00018300
//*                                                                            00018400
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                                      00018500
//*                                                                            00018600
//EPSDIAG    DD SYSOUT=&OUT                                                    00018700
//*                                                                            00018800
//* OUTPUT DATA SETS - SYSTEM OPERATION                                        00018900
//*                                                                            00019000
//SYSPRINT   DD SYSOUT=&OUT                                                    00019100
//*                                                                            00019200
//SYSOUT     DD SYSOUT=&OUT                                                    00019300
//*                                                                            00019400
//SYSDBOUT   DD SYSOUT=&OUT                                                    00019500
//*                                                                            00019600
//SYSDTERM   DD SYSOUT=&OUT                                                    00019700
//*                                                                            00019800
//SYSUDUMP   DD SYSOUT=&OUT                                                    00019900
//*                                                                            00020000
//DELETE   EXEC PGM=IEFBR14,                                                   00020100
//                 REGION=4K,                                                  00020200
//                 TIME=(0,5)                                                  00020300
//LOADMOD    DD DSNAME=&&LOADMOD,                                              00020400
//                 DISP=(OLD,DELETE)                                           00020500
//*                                                                            00020600
```

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Figure 5.5.2-a - continued. Cataloged Procedure EPRTM30

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA. EPMASTER would be the full data set name of an EIS/PS master file)
PROGRAM	PRTLNGP	Retrieval language processor program
REGION1	60K	Region size allocated for execution of language processor program
REGION2	100K	Region size allocated for execution of generated retrieval program
TIME1	'1,0'	Time allocated for execution of language processor program
TIME2	'2,0'	Time allocated for execution of generated retrieval program
TEMP	SYSDA	Unit type for temporary work space
MSTRFIL	EPMASTER	Lowest-level index of master file
ANSWRFL	EPANSRFL	Lowest-level index of answer file
UNIT	3330	Unit type to which the answer file is to be written
SERIAL	CDHSPK	Volume serial number of volume to which answer file is to be written

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Figure 5.5.2-b. Substitutable Parameters for EPRTM30

Parameter Name	Default Value	Description
DISP	'NEW,CATLG,DELETE'	Disposition of answer file
SPCUNIT	TRK	Units in which space for answer file is to be allocated
PRIMARY	20	Primary space allocation for answer file
SECNDRY	10	Secondary space allocation for answer file
MEMBER	PRTSKEL	Retrieval skeleton program
OUT	A	SYSOUT class for all print files
PARAM	'SIZE=94K,BUF=10K, NOSEO,SUPMAP, NOSOURCE'	Parameters for COBOL compiler

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Figure 5.5.2-b - continued. Substitutable Parameters for EPRTM30

5.5.3 SORT GENERATION - EPSRM30

5.5.3.1 Description

The cataloged procedure EPSRM30 executes the sort language processor program, PSRLNGP (EP0160), and compiles, link edits, and executes the generated sort program PSRGENR (EP0170). The load module for the generated sort program is not saved. For information on the cataloged procedure EPSRM10, which executes the sort language processor program and compiles, link edits, and saves the generated sort load module, see Section 5.3.2.5. Information on the cataloged procedure EPSRM20, which executes the sort load module stored by EPSRM10, can be found in Section 5.3.3.5. Information on PSRLNGP (EP0160) and PRTGENR (EP0170) can be found in Section 5.3.

5.5.3.2 JCL Listing

Figure 5.5.3-a contains a listing of the cataloged procedure EPSRM30.

5.5.3.3 Cross-reference of DD Names and Files

Program Name: PSRLNGP (EP0160)

DD Name	File Description	Input/Output
EPSSKEL	Sort skeleton program	Input
EPSINPT	Sort specification cards	Input
EPSPROG	Sort source program	Output
EPSDIAG	Diagnostic report	Output
SORTWK01	Sort work area	Internal

Program Name: PSRGENR (EP0170)

DD Name	File Description	Input/Output
EPSMSTR	EIS/PS master file	Input
EPSANSR	Sorted answer file	Output
EPSDIAG	Diagnostic report	Output

5.5.3.4 User-supplied JCL

To execute the cataloged procedure EPSRM30, the user must supply job accounting information and the data set names of the EIS/PS master file and the sorted answer file. See Figure 5.5.3-b for a description of the procedure's substitutable parameters. The sort specification cards must also be supplied.

5.5.3.5 Sample Run Stream

The following run stream uses the cataloged procedure EPSRM30. The input EIS/PS master file is 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMASTR1' and the output sorted answer file is 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.ANSWR1'. The answer file is to be cataloged so that it can be used in later runs. The records are sorted in ascending order by city.

```
// EXEC  EPSRM30,
//       MSTRFIL=EPMASTR1,
//       ANSWRFL=ANSWR1,
//       DISP='NEW,CATLG,DELETE'
//COMPILE.INPUT DD *
$$SORT
CITY                    A
$$END
/*
```

```
//* EPALMO/A0A7 HEDGEPETH, LLOYD H. (919) 541-5491                      00000100
//*                                                                     00000200
//*   PROCEDURE NAME: EPSRM30                                           00000300
//*   REVISION LEVEL: 1-00                                              00000400
//*   LAST UPDATE #: P-1                                                00000500
//*   DATE INCORPORATED: FEBRUARY 1, 1980                               00000600
//*                                                                     00000700
//*   THIS PROCEDURE ALLOWS THE USER TO CREATE AND                      00000800
//*   EXECUTE A GENERATED EIS/PS SORT                                   00000900
//*                                                                     00001000
//EPSRM30 PROC PROJECT='CU.EPALMO.A0A7.COBS.HO.PNT',                    00001100
//             PROGRAM=PSRLKGP,                                         00001200
//             PARAM='SIZE=120K,BUF=30K,NOSER,SUPMAP,NOSOURCE',         00001300
//             TEMP=SYSDA,                                              00001400
//             MSTRFIL=EPMASTER,                                        00001500
//             SORTFIL=EPSORTFL,                                        00001600
//             REGION1=60K,                                             00001700
//             REGION2=150K,                                            00001800
//             TIME1='1,0',                                             00001900
//             TIME2='3,0',                                             00002000
//             UNIT=3330,                                               00002100
//             SERIAL=LDHSPK,                                           00002200
//             DISP='NEW,CATLG,DELETE',                                 00002300
//             SPCUNIT=TRK,                                             00002400
//             PRIMARY=20,                                              00002500
//             SECNDRY=10,                                              00002600
//             MEMBER=PSRSKEL,                                          00002700
//             SORTSPC=50,                                              00002800
//             OUT=A                                                    00002900
//*                                                                     00003000
//COMPILE EXEC PGM=&PROGRAM,                                            00003100
//             REGION=&REGION1,                                         00003200
//             TIME=(&TIME1)                                            00003300
//*                                                                     00003400
//* PRODUCE EIS/PS MASTER FILE SORTER PROGRAM                           00003500
//*                                                                     00003600
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                                  00003700
//             VOLUME=(PRIVATE,RETAIN),                                 00003800
//             DISP=(SHR,PASS)                                          00003900
//           DD DSNAME=SYS1.COBLIB,                                     00004000
//             DISP=(SHR,PASS)                                          00004100
//*                                                                     00004200
//* INPUT DATA SET - SORTER PROGRAM SKELETON                            00004300
//*                                                                     00004400
//EPSSKEL    DD DSNAME=&PROJECT..SOURCE(&MEMBER),                       00004500
//             VOLUME=(PRIVATE,RETAIN),                                 00004600
//             DISP=(SHR,PASS)                                          00004700
//*                                                                     00004800
//* INPUT DATA SET - SORT SPECIFICATION CARDS                           00004900
//*                                                                     00005000
//EPSINPT    DD DDNAME=INPUT,                                           00005100
//             DCB=BLKSIZE=80                                           00005200
//*                                                                     00005300
//* OUTPUT DATA SET - SORTER PROGRAM                                    00005400
//*                                                                     00005500
//EPSPROG    DD UNIT=&TEMP,                                             00005600
```

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Figure 5.5.3-a. Cataloged Procedure EPSRM30

```
//                DISP=(NEW,PASS),                                      00005700
//                SPACE=(TRK,(5,2),RLSE),                               00005800
//                DSNAME=&&PROGRAM                                      00005900
//*                                                                     00006000
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                               00006100
//*                                                                     00006200
//EPSDIAG    DD SYSOUT=&OUT                                             00006300
//*                                                                     00006400
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00006500
//*                                                                     00006600
//SYSPRINT   DD SYSOUT=&OUT                                             00006700
//*                                                                     00006800
//SYSOUT     DD SYSOUT=&OUT                                             00006900
//*                                                                     00007000
//SYSDBOUT   DD SYSOUT=&OUT                                             00007100
//*                                                                     00007200
//SYSDTERM   DD SYSOUT=&OUT                                             00007300
//*                                                                     00007400
//SYSUDUMP   DD SYSOUT=&OUT                                             00007500
//*                                                                     00007600
//COBOL    EXEC PGM=IKFCBL00,                                           00007700
//                PARM='&PARAM',                                        00007800
//                REGION=100K,                                          00007900
//                TIME=(2,0)                                            00008000
//*                                                                     00008100
//* COMPILE SORTER PROGRAM                                              00008200
//*                                                                     00008300
//*                                                                     00008400
//* INPUT DATA SET - SOURCE LIBRARY                                     00008500
//*                                                                     00008600
//SYSLIB     DD DSNAME=&PROJECT..SOURCE,                                00008700
//                VOLUME=(PRIVATE,RETAIN),                              00008800
//                DISP=(SHR,PASS)                                       00008900
//*                                                                     00009000
//* INPUT DATA SET - COBOL SORTER PROGRAM SOURCE CODE                   00009100
//*                                                                     00009200
//SYSIN      DD DSNAME=&&PROGRAM,                                       00009300
//                DISP=(OLD,DELETE)                                     00009400
//*                                                                     00009500
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                               00009600
//*                                                                     00009700
//SYSPRINT   DD SYSOUT=&OUT                                             00009800
//*                                                                     00009900
//* OUTPUT DATA SET - COBOL SORTER PROGRAM OBJECT CODE                  00010000
//*                                                                     00010100
//SYSLIN     DD UNIT=&TEMP,                                             00010200
//                DISP=(NEW,PASS),                                      00010300
//                SPACE=(TRK,(5,2),RLSE),                               00010400
//                DSNAME=&&OBJMOD                                       00010500
//*                                                                     00010600
//* UTILITY DATA SETS                                                   00010700
//*                                                                     00010800
//SYSUT1     DD UNIT=&TEMP,                                             00010900
//                SPACE=(TRK,(50,100))                                  00011000
//*                                                                     00011100
//SYSUT2     DD UNIT=(&TEMP,SEP=SYSUT1),                                00011200
```

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Figure 5.5.3-a - continued. Cataloged Procedure EPSRM30

```
//             SPACE=(TRK,(50,100))                                         00011300
//*                                                                         00011400
//SYSUT3     DD UNIT=(&TEMP,SEP=(SYSUT1,SYSUT2)),                           00011500
//             SPACE=(TRK,(50,100))                                         00011600
//*                                                                         00011700
//SYSUT4     DD UNIT=(&TEMP,SEP=(SYSUT1,SYSUT2,SYSUT3)),                    00011800
//             SPACE=(TRK,(50,100))                                         00011900
//*                                                                         00012000
//LKED     EXEC PGM=IEWL,                                                   00012100
//             PARM='LIST,LET,XREF',                                        00012200
//             COND=(5,LT,COBOL),                                           00012300
//             REGION=100K,                                                 00012400
//             TIME=(1,0)                                                   00012500
//*                                                                         00012600
//* LINK-EDIT SORTER                                                        00012700
//*                                                                         00012800
//*                                                                         00012900
//* INPUT DATA SET - AUTO-CALL LIBRARY                                      00013000
//SYSLIB     DD DSNAME=&PROJECT..LOAD,                                      00013100
//             VOLUME=(PRIVATE,RETAIN),                                     00013200
//             DISP=(SHR,PASS)                                              00013300
//           DD DSNAME=SYS1.COBLIB,                                         00013400
//             DISP=(SHR,PASS)                                              00013500
//*                                                                         00013600
//* INPUT DATA SET - COBOL SORTER PROGRAM OBJECT CODE                       00013700
//*                                                                         00013800
//SYSLIN     DD DSNAME=&&OBJMOD,                                            00013900
//             DISP=(OLD,DELETE)                                            00014000
//           DD DDNAME=INPUT,                                               00014100
//             DCB=BLKSIZE=80                                               00014200
//*                                                                         00014300
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                                   00014400
//*                                                                         00014500
//SYSPRINT  DD SYSOUT=&OUT                                                  00014600
//*                                                                         00014700
//* OUTPUT DATA SET - COBOL SORTER PROGRAM LOAD MODULE                      00014800
//*                                                                         00014900
//SYSLMOD   DD UNIT=&TEMP,                                                  00015000
//             DISP=(MOD,PASS),                                             00015100
//             SPACE=(TRK,(10,5,1)),                                        00015200
//             DSNAME=&&LOADMOD(SORTER)                                     00015300
//*                                                                         00015400
//* UTILITY DATA SET                                                        00015500
//*                                                                         00015600
//SYSUT1     DD UNIT=&TEMP,                                                 00015700
//             SPACE=(TRK,(10,5))                                           00015800
//*                                                                         00015900
//SORT     EXEC PGM=*.LKED.SYSLMOD,                                         00016000
//             COND=((5,LT,COBOL),(5,LT,LKED)),                             00016100
//             REGION=&REGION2,                                             00016200
//             TIME=(&TIME2)                                                00016300
//*                                                                         00016400
//* SORT EIS/PS MASTER FILE                                                 00016500
//*                                                                         00016600
//STEPLIB    DD DSNAME=&PROJECT..LOAD,                                      00016700
//             VOLUME=(PRIVATE,RETAIN),                                     00016800
```

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Figure 5.5.3-a - continued. Cataloged Procedure EPSRM30

```
//              DISP=(SHR,PASS)                                         00016900
//           DD DSNAME=SYS1.COBLIB,                                     00017000
//              DISP=(SHR,PASS)                                         00017100
//*                                                                     00017200
//* INPUT DATA SET - EIS/PS MASTER FILE                                 00017300
//*                                                                     00017400
//EPSMSTR    DD DSNAME=&PROJECT..DATA.&MSTRFIL,                         00017500
//              VOLUME=(PRIVATE,RETAIN),                                00017600
//              DISP=(SHR,PASS)                                         00017700
//*                                                                     00017800
//* OUTPUT DATA SET - SORTED FILE                                       00017900
//*                                                                     00018000
//EPSANSR    DD UNIT=&UNIT,                                             00018100
//              VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                    00018200
//              DISP=(&DISP),                                           00018300
//              SPACE=(&SPCUNIT,(&PRIMARY,&SECNDRY),RLSE),              00018400
//              DSNAME=&PROJECT..DATA.&SORTFIL                          00018500
//*                                                                     00018600
//* OUTPUT DATA SET - DIAGNOSTIC MESSAGES                               00018700
//*                                                                     00018800
//EPSDIAG    DD SYSOUT=&OUT                                             00018900
//*                                                                     00019000
//* SORT/MERGE DATA SETS                                                00019100
//*                                                                     00019200
//SORTLIB    DD DSNAME=SYS1.SORTLIB,                                    00019300
//              DISP=(SHR,PASS)                                         00019400
//*                                                                     00019500
//SORTWK01   DD UNIT=&TEMP,                                             00019600
//              SPACE=(CYL,&SORTSPC,,CONTIG)                            00019700
//*                                                                     00019800
//SORTWK02   DD UNIT=(&TEMP,SEP=SORTWK01),                              00019900
//              SPACE=(CYL,&SORTSPC,,CONTIG)                            00020000
//*                                                                     00020100
//SORTWK03   DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                   00020200
//              SPACE=(CYL,&SORTSPC,,CONTIG)                            00020300
//*                                                                     00020400
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00020500
//*                                                                     00020600
//SYSPRINT   DD SYSOUT=&OUT                                             00020700
//*                                                                     00020800
//SYSOUT     DD SYSOUT=&OUT                                             00020900
//*                                                                     00021000
//SYSDBOUT   DD SYSOUT=&OUT                                             00021100
//*                                                                     00021200
//SYSDTERM   DD SYSOUT=&OUT                                             00021300
//*                                                                     00021400
//SYSUDUMP   DD SYSOUT=&OUT                                             00021500
//*                                                                     00021600
//DELETE   EXEC PGM=IEFBR14,                                            00021700
//              REGION=4K,                                              00021800
//              TIME=(0,5)                                              00021900
//LOADMOD    DD DSNAME=&&LOADMOD,                                       00022000
//              DISP=(OLD,DELETE)                                       00022100
//*                                                                     00022200
```

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Figure 5.5.3-a - continued. Cataloged Procedure EPSRM30

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087.CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMASTER would be the full data set name of an EIS/PS master file)
PROGRAM	PSRLNGP	Sort language processor program
REGION1	60K	Region size allocated for execution of language processor program
REGION2	150K	Region size allocated for execution of generated sort program
TIME1	'1,0'	Time allocated for execution of language processor program
TIME2	'3,0'	Time allocated for execution of generated sort program
SORTSPC	50	Work space allocated for sort work files
TEMP	SYSDA	Unit type for temporary work space
MSTRFIL	EPMASTER	Lowest-level index of master file
SORTFIL	EPSORTFL	Lowest-level index of sorted answer file
UNIT	3330	Unit type to which the sorted answer file is to be written
SERIAL	CDHSPK	Volume serial number of volume to which sorted answer file is to be written
DISP	'NEW,CATLG,DELETE'	Disposition of sorted answer file

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Figure 5.5.3-b. Substitutable Parameters for EPSRM30

Parameter Name	Default Value	Description
SPCUNIT	TRK	Units in which space for sorted answer file is to be allocated
PRIMARY	20	Primary space allocation for sorted answer file
SECNDRY	10	Secondary space allocation for sorted answer file
MEMBER	PSRSKEL	Sort skeleton program
OUT	A	SYSOUT class for all print files

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Figure 5.5.3-b - continued. Substitutable Parameters for EPSRM30

6.0 REPORTS

6.1. INTRODUCTION

EIS/PS provides the user with the capability to produce many reports. These reports can be categorized as (1) file listings, which present the contents of files with little or no accompanying analysis; (2) EPA-required reports; (3) summary reports, which present the results of various analyses of files; and (4) quick-look reports, which combine retrieval and report characteristics.

6.2 EPA-REQUIRED REPORTS

6.2.1 INTRODUCTION

Federal law requires the submission of point source emission data to EPA for inclusion in the NEDS data base. The annual report program, PRPENTR (EP0200) allows the user to generate the annual report from the EIS/PS master file. See Figure 6.2.1-a for a flowchart of the annual report generation process.

The option card for PRPENTR (EP0200) determines whether NEDS or EIS/PS transactions are generated. If the user is a local air pollution control agency, he may desire to submit EIS/PS transactions to the state agency if the state agency is also an EIS/PS user. Only information that has been added, changed, or deleted since the last execution of PRPENTR (EP0200) will be used for the output transactions. A new master file (indicating the new submission status of all the records) is created.

See Section 6.2.2 for a detailed discussion of PRPENTR (EP0200).

PRPENTR (EP0200) can be executed using the cataloged procedure EPRPM10, which is discussed in Section 6.2.2.5. A sample run stream for generating NEDS data from the master file is shown in Section 6.2.2.5.4.

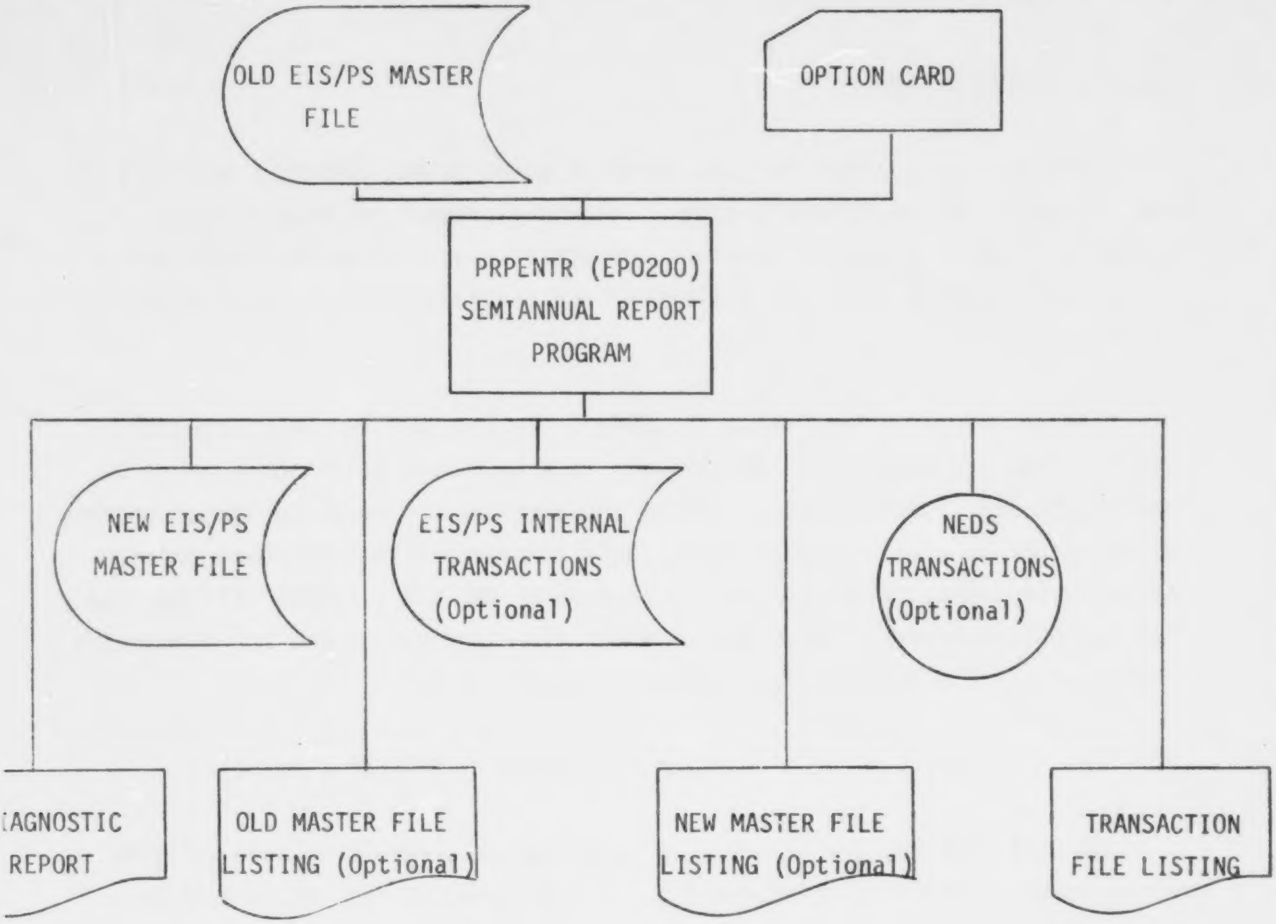

OLD EIS/PS MASTER FILE
OPTION CARD
PRPENTR (EP0200) SEMIANNUAL REPORT PROGRAM
NEW EIS/PS MASTER FILE
EIS/PS INTERNAL TRANSACTIONS (Optional)
NEDS TRANSACTIONS (Optional)
IAGNOSTIC REPORT
OLD MASTER FILE LISTING (Optional)
NEW MASTER FILE LISTING (Optional)
TRANSACTION FILE LISTING

Figure 6.2.1-a. Annual Report Flowchart

6.2.2. ANNUAL REPORT PROGRAM - PRPENTR (EP0200)

6.2.2.1 Description

The annual report program allows the user to submit EIS/PS master file data to NEDS by generating either NEDS point source transactions or EIS/PS internal transactions. The type of transactions that are generated is dependent upon the option specified by the user.

When EIS/PS internal transactions are being generated, the EIS/PS data flags for every master file record are scanned to see if they are 'on'. A data flag is on if it contains an 'A', 'C', or 'D'. These codes indicate add, change, and delete, respectively. A fourth code, 'E', indicates that the record (or the repeating section of the record) was added after the last annual report and is to be deleted from the master file (or record). No transaction is generated for data flagged with an 'E'. The data flags are set to these codes by the master file maintenance program, PFMMSTR (EP0120) (see Section 4.3.9 for a discussion of PFMMSTR (EP0120)). If the data associated with a flag has previously been submitted to NEDS, the flag will contain an 'S'. All data flags are set to 'S' by PRPENTR (EP0200).

When NEDS point source transactions are being generated, the NEDS data flags are handled in the same manner as the EIS/PS data flags; however, since the master file comment (type-3) records do not contain any NEDS data flags, no transactions are generated for these records. Although data is selected only from type-0, type-1, and type-2 records, the type-3 comment records are scanned to see if they are to be deleted from the master file.

The EIS/PS data flags are set independently of the NEDS data flags, except when records are flagged for deletion from the EIS/PS master file. In this case, all data flags for the records are set to 'D' or 'E' by PFMMSTR

(EP0120). Note that PRPENTR (EP0200) is the only program which physically deletes records from the EIS/PS master file.

New data in the EIS/PS master file (i.e., data added since the last annual report) will generate an add transaction. Data is recognized as new if its associated data flag contains an 'A'.

Data that has been changed since it was last submitted to NEDS will generate a change transaction. Data is recognized as being changed if its associated data flag contains a 'C'.

There are two types of deletions: deleting specific records or groups of records and deleting specific data fields. When a record or group of records is being deleted, the appropriate delete transaction is generated, and the records are not written to the output master file. An exception occurs when the associated data flag contains an 'E'. In that case, no transactions are generated, and the records are not written to the output master file. When a specific data field is being deleted, a change transaction is generated with an asterisk in the first position of the corresponding transaction field. As stated previously, PRPENTR (EP0200) is the only EIS/PS program that actually deletes records from the master file.

Refer to Figure 6.2.2-a for a cross-reference of EIS/PS data flags, transactions, and valid action codes. See Figure 6.2.2-b for a cross-reference of NEDS data flags, transactions, and valid action codes.

6.2.2.2 File Formats

Input to PRPENTR (EP0200) consists of the EIS/PS master file and an option card. See Figure 4.3.9-a for a description of the master file and Section 6.2.2.3 for a discussion of the options.

Output from the program consists of an updated EIS/PS master file; either NEDS transactions or EIS/PS internal transactions; a diagnostic report; and, optionally, listings of the input and output master files and the transactions.

The updated EIS/PS master file records have been flagged to indicate that any new or changed data has been submitted to NEDS. The updated master file will not contain any records that had been flagged for deletion.

The diagnostic report contains counts of the input and output master files. It also contains a count of the output transactions and of any errors that were detected, as well as a list of these errors. See Figure 6.2.2-c for a sample diagnostic report.

The input and output master file listings and the transaction listing are optional. The master file listings contain only partial records since one print line cannot accommodate an entire record. If the user wishes to see entire records, the master file formatted dump program, PRPDUMP (EP0220), can be run using either the input or output master file or a retrieved answer file in master file format. Entire transaction records will be printed in the transaction listing since neither type of transaction (NEDS or EIS/PS) exceeds the length of a standard print line. See Figures 6.2.2-d and 6.2.2-e for sample listings of the input and output master files, respectively. See Figure 6.2.2-f for a sample listing of the NEDS point source transactions and Figure 6.2.2-g for a sample listing of the EIS/PS internal transactions.

6.2.2.3 Options and Control Cards

The option card for PRPENTR (EP0200) provides the user with three options: a transaction option, a warning option, and a list option. The transaction option allows the user to choose which type of transactions are to be generated (NEDS point source or EIS/PS internal transactions). If 'NEDS' is specified in columns 1 through 4 of the option card, the program will generate NEDS point source transactions. To generate EIS/PS internal transactions, the user must specify 'POINT' in columns 1 through 5 of the option card. If this field is left blank or if the option is specified incorrectly, program execution will be terminated, and an abort message will be printed to indicate this action.

The warning option allows the user to suppress the printing of warning messages. If the user does not want to suppress warning messages, he must code 'FLAGW' in columns 7 through 11 and leave column 12 and 13 blank. To suppress warning messages, the user must code 'NOFLAGW' in columns 7 through 13 of the option card. If this field is left blank or if the option is specified incorrectly, the program will assume a default of 'NOFLAGW', and a conditional message will be printed to indicate this action.

The list option allows the user to obtain listings of the input master file, the output master file, and the generated transactions. These listings are useful for confirming that the appropriate data has been submitted to NEDS and for diagnosing potential errors. To obtain listings, the user must code 'LIST' in columns 15 through 18 of the option card and leave columns 19 and 20 blank. To suppress the listings, the user must code 'NOLIST' in columns 15 through 20 of the option card. If this field is left blank or if the option is specified incorrectly, the program will assume a default of 'NOLIST', and a conditional message will be printed to indicate this action.

See Figure 6.2.2-h for the option card format.

6.2.2.4 Error Messages

PRPENTR 001 ABORT - NO OPTION CARD, NEDS OR POINT MUST BE SPECIFIED

Meaning: No option card is present in the run stream. Since the transaction option must be specified, program execution was terminated.

Action: Insert an option card in the run stream and resubmit the job.

PRPENTR 002 ABORT - INVALID TRANSACTION OPTION SPECIFIED, MUST BE NEDS OR POINT

Meaning: The transaction option is not specified correctly, or the field is blank.

Action: Insure that the appropriate option is coded in the proper card columns and resubmit the job.

PRPENTR 003 CONDITIONAL - INVALID FLAGW OPTION, DEFAULT (NOFLAGW) USED

Meaning: The warning option is specified incorrectly, or the field is blank.

Action: If the warning messages are required, code 'FLAGW' in the proper columns of the option card and resubmit the job.

PRPENTR 004 CONDITIONAL - INVALID LIST OPTION, DEFAULT (NOLIST) USED

Meaning: The list option is specified incorrectly, or the field is blank.

Action: If listings are desired, the user must code 'LIST' in the proper columns of the option card and resubmit the job.

PRPENTR 005 WARNING - INVALID OPTION SPECIFIED IN COLUMNS 20 THRU 80 - IGNORED

Meaning: Columns 20 through 80 of the option card are reserved for future use and must be blank on the user's option card.

Action: No action need be taken.

PRPENTR 006 ABORT - INPUT MASTER FILE OUT OF SEQUENCE, SEE KEYS ABOVE - CALL NADB

Meaning: The input master file is not in proper master file sequence, or duplicate keys are present in the master file. The keys of the two previously read records are printed prior to this message in the order in which they were read. Program execution is terminated. The EIS/PS master file should never be out of sequence; therefore, this error indicates a possible programming error at some point in the EIS/PS system.

Action: Insure that the proper EIS/PS master file is being used. An answer file from the generated sort program, PSRGENR (EP0170), should not be used since the records might not be in the proper sequence and records with duplicate keys might be present. Supply the proper file and resubmit the job. If the proper file is being used, contact personnel at the National Air Data Branch for further assistance.

PRPENTR 007 ABORT - INVALID RECORD TYPE ON INPUT MASTER FILE

Meaning: An input master file record contains a record type other than 0, 1, or 2. The record is listed prior to the error message, and program execution is terminated.

Action: Insure that the proper master file is being used as input, and resubmit the job. If the proper file is being used, contact personnel at the National Air Data Branch for further assistance.

PRPENTR 008 ABORT - NO INPUT MASTER FILE RECORDS AVAILABLE

Meaning: This message occurs when the input master file contains no records.

Action: Insure that the proper file is being used as input, and resubmit the job.

PRPENTR 009 DISASTER - OUTPUT MASTER FILE OUT OF SEQUENCE, SEE KEYS ABOVE - CALL NADB

Meaning: The output master file is not being written in proper master file sequence. The keys of the two previously written master file records are listed prior to this message in the order in which they were written to the output master file. Program execution is terminated.

Action: Contact personnel at the National Air Data Branch for further assistance.

6.2.2.5 Cataloged JCL - EPRPM10

6.2.2.5.1 JCL listing - PRPENTR (EP0200) can be executed by the cataloged procedure EPRPM10. See Figure 6.2.2-i for a listing of EPRPM10.

6.2.2.5.2 Cross-reference of DD names and files

Program Name: PRPENTR (EP0200)

DD Name	File Description	Input/Output
EPSOLMF	EIS/PS master file	Input
EPSOPTN	Option card	Input

EPSNWMF	New or updated EIS/PS master file	Output
EPSPSTR	EIS/PS transaction file	Output
EPSNDTR	NEDS transaction file	Output
EPSDIAG	Diagnostic report	Output
EPSOLDL	Input master file listing	Output
EPSTRNL	Transaction listing	Output
EPSNEWL	Output transaction listing	Output

6.2.2.5.3 User-supplied JCL - To execute the cataloged procedure EPRPM10, the user must specify the data set names of the input and output EIS/PS master files and of the transaction file. An option card must also be supplied. See Figure 6.2.2-j for a description of the procedure's substitutable parameters.

6.2.2.5.4 Sample run stream - The following run stream would generate NEDS point source transactions. The data set names of the input master file, the output master file, and the NEDS transaction file are their respective default values. These files will be listed, and any warning messages will be printed in the diagnostic report. Also, a dummy file has been substituted for the EIS/PS transaction file.

```
// EXEC EPRPM10
//REPORT.EPSPSTR DD DUMMY
//REPORT.OPTIONS DD *
NEDS  FLAGW  LIST
/*
```

The following run stream would generate EIS/PS internal transactions. The data set names of the input master file, the output master file, and the

EIS/PS transaction file are their respective default values. These files will be listed, and any warning messages will be printed in the diagnostic report. Also, a dummy file has been substituted for the NEDS transaction file.

```
// EXEC ECRPM10
//REPORT.EPSNDTR DD DUMMY
//REPORT.OPTIONS DD *
POINT FLAGW   LIST
/*
```

6.2.2.6 Warnings and Special Instructions

PRPENTR (EP0200) submits new, changed, and deleted data to NEDS by generating appropriate transactions; therefore, the user should insure that the most current EIS/PS master file is supplied as input to this program. The user is further warned not to use an answer file from the generated sort program, PSPGENR (EP0170), since the file may not be in proper master file sequence and since duplicate keys may exist in such a file. An out-of-sequence file, or one containing duplicate keys, will cause program execution to be terminated.

If transactions are generated for purposes other than submitting data to NEDS, these transactions should be sorted before further processing is begun.

6.2.2.7 Cost Considerations

To reduce the cost of executing PRPENTR (EP0200), the user should specify the NOFLAGW and NOLIST options.

The estimates listed below are based on the execution, on an IBM 370/168, of the first run stream in Section 6.2.2.5.4.

Number of input master file records:	172 records
Number of NEDS transactions generated:	334 transactions
Number of EIS/PS internal transactions generated:	0 transactions
Number of output master file records:	172 records
Number of errors detected:	0 errors
CPU time:	.84 seconds
I/O time:	1.69 seconds
Total time:	2.53 seconds
Estimated cost:	$.35

6.2.2.8 Related Programs and Procedures

There are no related programs or procedures.

Record Type	Data Flag	Transaction Type	Valid Transaction Codes
Plant	EIS-01	Plant-01	A, C, D
(type-0)	EIS-02	Plant-02	A, C
	EIS-03	Plant-03	A, C
	EIS-04	Plant-04	A, C
Point	EIS-11	Point-11	A, C, D
(type-1)	EIS-12	Point-12	A, C
	EIS-13	Point-13	A, C, D
		(1 or more 13 transactions)	
	EIS-14	Point-14	A, C
SCC	EIS-21	SCC-21	A, C, D
(type-2)	EIS-22	SCC-22	A, C
	EIS-23	SCC-23	A, C, D
		(1 or more 23 transactions)	
	EIS-24	SCC-24	A, C
	EIS-25	SCC-25	A, C
Comment	EIS-30	Comment-30	A, C, D
(type-3)		(1 or 2 transactions)	

Figure 6.2.2-a. Cross-reference of EIS/PS Data Flags

Record Type	Data Flag	Transaction Type	Valid Transaction Codes
Plant	NEDS-P1	P1	A, C, D
(type-0)	NEDS-P7-PLANT	P7	A, C
Point	NEDS-P2	P2	A, C, D
(type-1)	NEDS-P3	P3	A, C
	NEDS-P4	P4	A, C
	NEDS-P5	P5	A, C
	NEDS-P7-POINT	P7	A, C
SCC	NEDS-P6	P6	A, C, D
(type-2)	NEDS-P6-SCC	P7	A, C
Comment	N/A	N/A	N/A
(type-3)			

Figure 6.2.2-b. Cross-reference of NEDS Data Flags

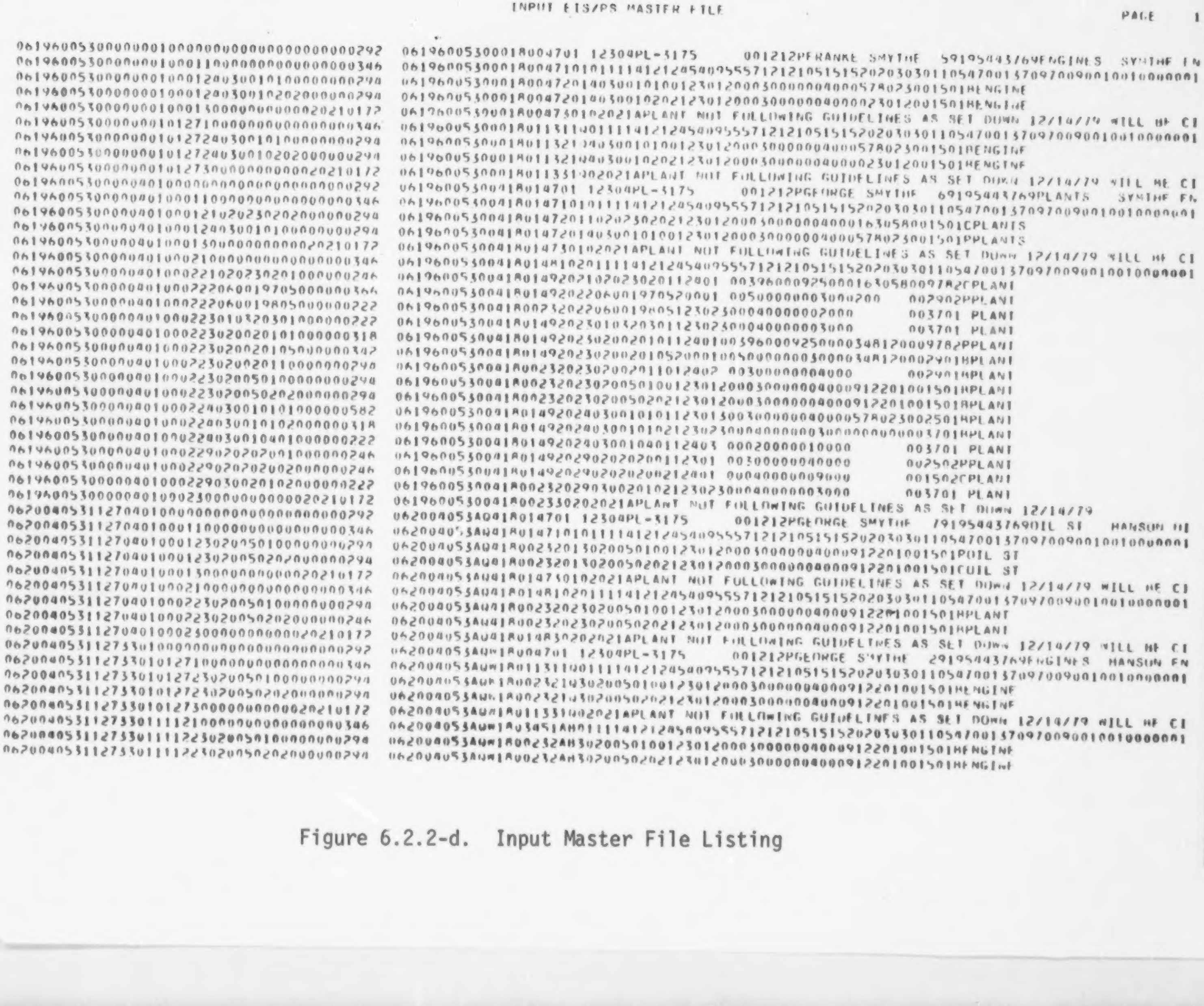
```
                    EIS/PS ANNUAL REPORT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE     1

PROGRAM NAME: PRPENTR (EP0200)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980


OPTION CARD: NEDS  FLAGN   LIST


INPUT EIS/PS MASTER FILE COUNT:            172
OUTPUT EIS/PS MASTER FILE COUNT:           172
RECORDS DELETED FROM MASTER FILE:            0
NEDS  OUTPUT TRANSACTIONS COUNT:           334
   ADD TRANSACTIONS COUNT:                 334
   CHANGE TRANSACTIONS COUNT:                0
   DELETE TRANSACTIONS COUNT:                0
NUMBER OF ERROR MESSAGES:                    0
NUMBER OF WARNING MESSAGES:                  0
NUMBER OF CONDITIONAL MESSAGES:              0
NUMBER OF ABORT MESSAGES:                    0
NUMBER OF DISASTER MESSAGES:                 0
```

Figure 6.2.2-c. Diagnostic Report



```
                                                        INPUT EIS/PS MASTER FILE                                                                      PAGE    1

06196005300000001000000000000000000000292  06196005300018004701 12304PL-3175      001212PFRANKE SMYTHE   59195443/69ENGINES   SMYTHE IN
06196005300000001000110000000000000000346  06196005300018004710101111412124540955571212105151520203030110547001370970090010010000001
06196005300000001000124030010100000000294  0619600530001800472014030010100123012000300000040000578023001501BENGINE
06196005300000001000124030010202000000294  0619600530001800472014030010202123012000300000040000230120015 01BENGINE
06196005300000001000130000000000020210172  06196005300018004730102021APLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
06196005300000001012710000000000000000346  06196005300018011311401111412124540955571212105151520203030110547001370970090010010000001
06196005300000001012724030010100000000294  0619600530001801132124030010100123012000300000040000578023001501BENGINE
06196005300000001012724030010202000000294  0619600530001801132144030010202123012000300000040000230120015 01BENGINE
06196005300000001012730000000000020210172  06196005300018011331402021APLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
06196005300000401000000000000000000000292  06196005300418014701 12304PL-3175      001212PGEORGE SMYTHE   69195443/69PLANTS    SMYTHE EN
06196005300000401000110000000000000000346  06196005300418014710101111412124540955571212105151520203030110547001370970090010010000001
06196005300000401000121020230202000000294  0619600530041801472011020230202123012000300000040001630580015 01CPLANTS
06196005300000401000124030010100000000294  0619600530041801472014030010100123012000300000040000578023001501PPLANTS
06196005300000401000130000000000020210172  06196005300418014730102021APLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
06196005300000401000210000000000000000346  06196005300418014810201111412124540955571212105151520203030110547001370970090010010000001
06196005300000401000221020230201000000246  061960053004180149202102023020112401  003960009250001630580009782CPLANT
06196005300000401000222060019705000000366  061960053004180149202206001970520001  005000000003000200      002902PPLANT
06196005300000401000222060019805000000222  061960053004180023202206001980512302300040000000 2000       003701 PLANT
06196005300000401000223010320301000000222  061960053004180149202301032030112302300040000000 3000       003701 PLANT
06196005300000401000223020020101000000318  06196005300418014920230200201011240100396000925000034812000978 2PPLANT
06196005300000401000223020020105000000342  06196005300418014920230200201052000100500000003000034812000290 1HPLANT
06196005300000401000223020020110000000290  061960053004180023202302002011012402  003000000004000       002901HPLANT
06196005300000001000223020050100000000294  0619600530041800232023020050100123012000300000004000091220100150 1HPLANT
06196005300000401000223020050202000000294  0619600530041800232023020050202123012000300000004000091220100150 1BPLANT
06196005300000401000224030010101000000582  0619600530041801492024030010101123013003000000040000578023002501HPLANT
06196005300000401000224030010102000000318  0619600530041801492024030010102123023000400000000300000000003701HPLANT
06196005300000401000224030010401000000222  061960053004180149202403001040112403  00020000000100000       003701 PLANT
06196005300000401000229020202001000000246  061960053004180149202902020200112301  00300000000400000       002502PPLANT
06196005300000401000229020202002000000246  061960053004180149202902020200212401  00040000000090000       001502CPLANT
06196005300000401000229030020102000000222  0619600530041800232029030020102123023000400000000 3000       003701 PLANT
06196005300000401000230000000000020210172  06196005300418002330202021APLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79
06200405311270401000000000000000000000292  062004053A0418014701 12304PL-3175      001212PGEORGE SMYTHE   79195443769OIL ST    HANSON HI
06200405311270401000110000000000000000346  062004053A04180147101011114121245409555712121051515202030301105470013709700900100100000001
06200405311270401000123020050100000000294  062004053A041800232013020050100123012000300000040000912201001501POIL ST
06200405311270401000123020050202000000294  062004053A041800232013020050202123012000300000040000912201001501COIL ST
06200405311270401000130000000000020210172  062004053A0418014730102021APLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
06200405311270401000210000000000000000346  062004053A04180148102011114121245409555712121051515202030301105470013709700900100100000001
06200405311270401000223020050100000000294  062004053A041800232023020050100123012000300000040000912201001501HPLANT
06200405311270401000223020050202000000246  062004053A041800232023020050202123012000300000040000912201001501HPLANT
06200405311270401000230000000000020210172  062004053A0418014830202021APLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
06200405311273301000000000000000000000292  062004053AUW18004701 12304PL-3175      001212PGEORGE SMYTHE   29195443769ENGINES   HANSON EN
06200405311273301012710000000000000000346  062004053AUW18011311001111412124540955571212105151520203030110547001370970090010010000001
06200405311273301012723020050100000000294  062004053AUW1800232143020050100123012000300000040000912201001501HENGINE
06200405311273301012723020050202000000294  062004053AUW1800232143020050202123012000300000040000912201001501HENGINE
06200405311273301012730000000000020210172  062004053AUW18011331002021APLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
06200405311273301111210000000000000000346  062004053AUW1803451AH011114121245409555712121051515202030301105470013709700900100100000001
06200405311273301111223020050100000000294  062004053AUW180023 2AH3020050100123012000300000040000912201001501HENGINE
06200405311273301111223020050202000000294  062004053AUW180023 2AH3020050202123012000300000040000912201001501HENGINE
```

Figure 6.2.2-d. Input Master File Listing

```
                                                    OUTPUT EIS/PS MASTER FILE                                                                  PAGE    1

0619600530000000100000000000000000000000292   06196005300018004701 12304PL-3175      001212PFRANKE SMYTHE   59195443769ENGINES  SYMTHE EN
0619600530000000100011000000000000000346   061960053000180047101011114121245409555712121051515202030301105470013709700900100100000001
0619600530000000100012803001010000000294   061960053000180047201403001010012301200030000000000578023001501RENGINE
0619600530000000100012403001020200000294   061960053000180047201403001020212301200030000004000023012001501RENGINE
0619600530000000100013000000000020210172   06196005300018004730102021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
0619600530000000101271000000000000000346   06196005300018011311401111141212454095557121210515152020303011054700137097009001001000000001
0619600530000000101272403001010000000294   061960053000180113214403001010012301200030000004000578023001501RENGINE
0619600530000000101272403001020200000294   061960053000180113214403001020212301200030000004000023012001501RENGINE
0619600530000000101273000000000020210172   06196005300018011331402021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
0619600530000040100000000000000000000242   06196005300418014701 12304PL-3175      001212PGEORGE SMYTHE   69195443769PLANTS   SYMTHE EN
0619600530000040100011000000000000000346   0619600530041801471010111141212454095557121210515152020303011054700137097009001001000000001
0619600530000040100012102023020200000294   061960053004180147201102023020212301200030000004000163058001501CPLANTS
0619600530000040100012803001010000000294   061960053004180147201403001010012301200030000004000578023001501PPLANTS
0619600530000040100013000000000020210172   06196005300418014730102021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
0619600530000040100021000000000000000346   0619600530041801481020111141212454095557121210515152020303011054700137097009001001000000001
0619600530000040100022102023020100000246   061960053004180149202102023020112001 00396000925000163058009782CPLANT
0619600530000040100022206001970500000366   061960053004180149202206001970520001 00500000003000200      002902PPLANT
0619600530000040100022206001980500000222   0619600530041800232022060019805123023000400000002000       003701 PLANT
0619600530000040100022301032030100000222   0619600530041801492023010320301123023000400000003000       003/01 PLANT
0619600530000040100022302002010100000318   06196005300418014920230200201011200100396000925000034812000978 2PPLANT
0619600530000040100022302002010500000342   06196005300418014920230200201052000100500000000000348120002901HPLANT
0619600530000040100022302002011000000294   061960053004180023202302002011012402 003000000004000       002901HPLANT
0619600530000040100022302005010000000294   061960053004180023202302005010012301200030000004000912201001501HPLANT
0619600530000040100022302005020200000294   061960053004180023202302005020212301200030000004000912201001501HPLANT
0619600530000040100022803001010100000582   061960053004180149202403001010112301300300000400005780230025 01HPLANT
0619600530000040100022403001010200000318   0619600530041801492024030010102123023000400000030000000000003701HPLANT
0619600530000040100022403001040100000222   061960053004180149202403001040112003 0020000010000       003/01 PLANT
0619600530000040100022902020200100000246   061960053004180149202902020200112301 00300000040000       002502PPLANT
0619600530000040100022902020200200000246   061960053004180149202902020200212401 00040000009000       001502CPLANT
0619600530000040100022903002010200000222   0619600530041800232029030020102123023000400000003000       003/01 PLANT
0619600530000040100023000000000020210172   06196005300418002330202021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79
0620040531127040100000000000000000000242   062004053A0418014701 12304PL-3175      001212PGEORGE SMYTHE   79195443769OIL ST   HANSON OI
0620040531127040100011000000000000000346   062004053A041801471010111141212454095557121210515152020303011054700137097009001001000000001
0620040531127040100012302005010000000294   062004053A04180023201302005010012301200030000004000912201001501POIL ST
0620040531127040100012302005020200000294   062004053A04180023201302005020212301200030000004000912201001501COIL ST
0620040531127040100013000000000020210172   062004053A0418014730102021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
0620040531127040100021000000000000000346   062004053A041801481020111141212454095557121210515152020303011054700137097009001001000000001
0620040531127040100022302005010000000294   062004053A04180023202302005010012301200030000000000912201001501HPLANT
0620040531127040100022302005020200000246   062004053A04180023202302005020212301200030000004000912201001501HPLANT
0620040531127040100023000000000020210172   062004053A0418014830202021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
0620040531127330100000000000000000000242   062004053A0W18004701 12304PL-3175      001212PGEORGE SMYTHE   29195443769ENGINES  HANSON EN
0620040531127330101271000000000000000346   062004053A0W1801131140111141212454095557121210515152020303011054700137097009001001000000001
0620040531127330101272302005010000000294   062004053A0W180023214302005010012301200030000004000912201001501RENGINE
0620040531127330101272302005020200000294   062004053A0W180023214302005020212301200030000004000912201001501RENGINE
0620040531127330101273000000000020210172   062004053A0W18011331402021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
0620040531127330111121000000000000000346   062004053A0W1803451AH011114121245409555712121051515202030301105470013709700900100100000001
0620040531127330111122302005010000000294   062004053A0W1800232AH302005010012301200030000004000912201001501RENGINE
0620040531127330111122302005020200000294   062004053A0W1800232AH302005020212301200030000004000912201001501RENGINE
0620040531127330111123000000000020210172   062004053A0W1800233AH02021SPLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CI
0800082400800000100000000000000000000242   080008240080017500001                    1APR SMITH                                       SAINT AGN
```

Figure 6.2.2-e. Output Master File Listing

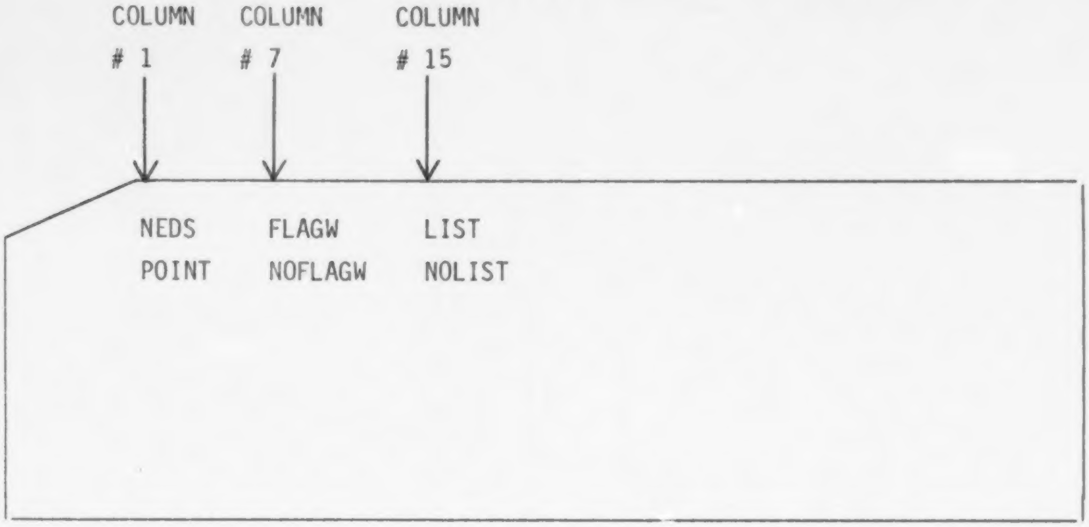
```
                                                  NEDS  OUTPUT TRANSACTIONS                                      PAGE    1

061960053000100121280SYMTHE ENGINE CO                                    FRANKE SMYTHP    AP1
0619600530001  80          PLANT NOT IN PRODUCTION 12/79 THRU /4/80                       AP7
0619600530001018011412124540955500900100100000001230900                                   AP2
0619600530001018000137022041                         022041985        985                 AP3
0619600530001018002030301105470000100                                      00001005   3097    AP4
0619600530001018000000300                        0000300281107912151   44   15   17 AP5
06196005300010180          POINT ADDED 12/14/79                                           AP7
06196005300010180403001010003000000400057802300150ENGINE                      B1          AP6
0619600530001018040300101SCC LEFT COMMENT P7        SCC RIGHT P7 COMMENT                  AP7
06196005300010180403001020003000000400002301200150ENGINE                      B1          AP6
0619600530001018040300102SCC LEFT COMMENT P7                                              AP7
0619600530001108011412124540955500900100100000001230900                                   AP2
0619600530001108000137022041                         022041985        985                 AP3
0619600530001108002030301105470000100                                      00001005   3097    AP4
0619600530001108000000300                        0000300281107912151   44   15   17 AP5
0619600530001108           POINT ADDED 12/14/79                                           AP7
06196005300011080403001010003000000400057802300150ENGINE                      B1          AP6
0619600530001108040300101SCC LEFT COMMENT P7        SCC RIGHT P7 COMMENT                  AP7
06196005300011080403001020003000000400002301200150ENGINE                      B1          AP6
0619600530001108040300102SCC LEFT COMMENT P7                                              AP7
061960053004100121280SYMTHE ENGINE CO                                    GEORGE SMYTHP    AP1
0619600530041  80          PLANT NOT IN PRODUCTION 12/79 THRU /4/80                       AP7
0619600530041018011412124540955500900100100000001230900                                   AP2
0619600530041018000137                       022041022041         985985                  AP3
061960053004101800203030110547                                 000023000000230   33097    AP4
06196005300410180                        0000300000030028110791215   44   15   17 AP5
06196005300410180          POINT ADDED 12/14/79                                           AP7
061960053004101801020230200030000000400016305800150PLANTS                     C1          AP6
0619600530041018010202302SCC LEFT COMMENT P7                                              AP7
06196005300410180403001010003000000400057802300150PLANTS                      P1          AP6
0619600530041018040300101SCC LEFT COMMENT P7        SCC RIGHT P7 COMMENT                  AP7
0619600530041028011412124540955500900100100000001230900                                   AP2
0619600530041028000137022041                         022041965        985                 AP3
06196005300410280020303011054700000051                                     00002303   2097    AP4
0619600530041028000000300                        0000503281107912151   44   15   17 AP5
```

Figure 6.2.2-f. NEDS Point Source Transaction Listing

```
                                         EIS/PS OUTPUT TRANSACTIONS                                  PAGE    2
0620040531127330101272302005010000000232062004053A0W180060             F 42101                                  23C
0620040531127330101272302005020200000212062004053A0W180060                              F                       21C
0620040531127330101272302005020200000232062004053A0W180061             F 221040000002403                        23C
0620040531127330101272302005020200000232062004053A0W180060             F 11101                                  23C
0620040531127330101272302005020200000232062004053A0W180060             F 42602                                  23C
0620040531127330101272302005020200000232062004053A0W180060             F 42101                                  23C
0620040531127330101273000000000000202130006200405 3A0W1800651002021                                             30D
0620040531127330111122302005010000000212062004053A0W180060                              F                       21C
0620040531127330111122302005010000000232062004053A0W180061             F 221040000002403                        23C
0620040531127330111122302005010000000232062004053A0W180060             F 11101                                  23C
0620040531127330111122302005010000000232062004053A0W180060             F 42101                                  23C
0620040531127330111122302005010000000232062004053A0W180060             F 42602                                  23C
0620040531127330111122302005020200000212062004053A0W180060                              F                       21C
0620040531127330111122302005020200000232062004053A0W180060             F 11101                                  23C
0620040531127330111122302005020200000232062004053A0W180060             F 42101                                  23C
0620040531127330111122302005020200000232062004053A0W180060             F 42602                                  23C
0620040531127330111122302005020200000232062004053A0W180061             F 221080000002403                        23C
08000824008000010001100000000000000000110080008240800180065 01                                                  11D
0800802400800000200012305020010000000210080080240800280065013050200100                                          21D
180060224000000030000000000000000000000121800602240003800 65                                 9195551212         01C
1800602240000000300000000000000000000000321800602240003800652400 PARK AVENUE, JEFFERSON N.C.                    03C
180060224000000030000000000000000000000042180060224000380065ADDRESS & PHONE NUMBER ADDED 03/21/80               04C
18006022400000003000310000000000000000012218006022400038006503                      180018005211                12C
1800602240000000300031000000000000000001421800602240003800650 3COMPLIANCE DATA & FCAP ADDED 03/21/80            14C
1800602240000000300032103002090000000231180060224000380065031030020900  22301000040500A                         23A
180060224000000030003210300209000000024118006022400038006503103002090 0PULL 22301 ADDED 03/21/80                24A
18006022400000003000330000000000000001301180060224000380065030000 1LNO MORE CHANGES, ADDITIONS, OR DELETIONS WERE MADE 30A
18006022400000003000330000000000000001301180060224000380065030000 1BEYOND THIS POINT IN THE FILE                  30A
```

Figure 6.2.2-g. EIS/PS Internal Transaction Listing



Note: NEDS or POINT must be specified.

Figure 6.2.2-h. Option Card Format

```
//* EPALMH/A087 HEDGEPETH, LLOYD A. (919) 541-5491                      00000100
//*                                                                     00000200
//*   PROCEDURE NAME: EPRPM10                                           00000300
//*   REVISION LEVEL: 1-00                                              00000400
//*   LAST UPDATE #: P-1                                                00000500
//*   DATE INCORPORATED: FEBRUARY 1, 1980                               00000600
//*                                                                     00000700
//*   THIS PROCEDURE ALLOWS THE USER TO CREATE GEDS OR EIS/PS           00000800
//*   INTERNAL TRANSACTIONS FOR THE ANNUAL REPORT                       00000900
//*                                                                     00001000
//*                                                                     00001100
//EPRPM10 PROC PROJECT='CO.EPALMH.A087.CONS.HQ.PNL',                    00001200
//             PROGRAM=PRPENTR,                                         00001300
//             REGION1=150K,                                            00001400
//             TIME1='2,0',                                             00001500
//             OLDMSTR=EPOLDMST,                                        00001600
//             NEWMSTR=EPNEWMST,                                        00001700
//             TRANFL1=EPNEDS,                                          00001800
//             TRANFL2=EPPOTOT,                                         00001900
//             UNIT1=2400,                                              00002000
//             UNIT2=2400,                                              00002100
//             UNIT3=3330,                                              00002200
//             SERIAL1=NEDTPE,                                          00002300
//             SERIAL2=PNLTPE,                                          00002400
//             SERIAL3=CONSPK,                                          00002500
//             DISP1='NEW,KEEP',                                        00002600
//             DISP2='NEW,KEEP',                                        00002700
//             DISP3='NEW,CATLG,DELETE',                                00002800
//             LABEL1=1,                                                00002900
//             LABEL2=1,                                                00003000
//             LABEX1=NL,                                               00003100
//             LABEX2=NL,                                               00003200
//             SPCUNIT=TRK,                                             00003300
//             PRIMARY=20,                                              00003400
//             SECNDRY=10,                                              00003500
//             OUT=A                                                    00003600
//*                                                                     00003700
//REPORT  EXEC PGM=&PROGRAM,                                            00003800
//             REGION=&REGION1,                                         00003900
//             TIME=(&TIME1)                                            00004000
//*                                                                     00004100
//*  CREATE TRANSACTIONS FOR THE ANNUAL REPORT                          00004200
//*                                                                     00004300
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                   00004400
//             VOLUME=(PRIVATE,RETAIN),                                 00004500
//             DISP=(SHR,PASS)                                          00004600
//*                                                                     00004700
//*  INPUT DATA SET - OLD EIS/PS MASTER FILE                            00004800
//*                                                                     00004900
//EPSOLMF   DD DSNAME=&PROJECT..DATA.&OLDMSTR,                          00005000
//             VOLUME=(PRIVATE,RETAIN),                                 00005100
//             DISP=(SHR,PASS)                                          00005200
//*                                                                     00005300
//*  INPUT DATA SET - OPTION CARD                                       00005400
//*                                                                     00005500
//EPSOPTI   DD DSNAME=OPTIONS,                                          00005600
```

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Figure 6.2.2-i. Cataloged Procedure EPRPM10

```
//              DCB=BLKSIZE=80                                            00005700
//*                                                                       00005800
//*  OUTPUT DATA SET - NEDS TRANSACTIONS                                  00005900
//*                                                                       00006000
//EPSNEDR   DD DSNAME=&PROJECT..DATA.&TRANFL1,                            00006100
//              DISP=(&DISP1),                                            00006200
//              UNIT=&UNIT1,                                              00006300
//              VOLUME=SER=&SERIAL1,                                      00006400
//              DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                     00006500
//*             RING=IN,     CHANGE TO USER SPECIFICATIONS                00006600
//              LABEL=(&LABEL1,&LABCK1)                                   00006700
//*                                                                       00006800
//*  OUTPUT DATA SET - EIS/PS TRANSACTIONS                                00006900
//*                                                                       00007000
//EPSPSTR   DD DSNAME=&PROJECT..DATA.&TRANFL2,                            00007100
//              DISP=(&DISP2),                                            00007200
//              UNIT=&UNIT2,                                              00007300
//              VOLUME=SER=&SERIAL2,                                      00007400
//              DCB=(RECFM=FB,LRECL=120,BLKSIZE=3120),                    00007500
//*             RING=IN,     CHANGE TO USER SPECIFICATIONS                00007600
//              LABEL=(&LABEL2,&LABCK2)                                   00007700
//*                                                                       00007800
//*  OUTPUT DATA SET - NEW EIS/PS MASTER FILE                             00007900
//*                                                                       00008000
//EPSNEWF   DD DSNAME=&PROJECT..DATA.&NEWMSTR,                            00008100
//              UNIT=&UNIT3,                                              00008200
//              VOLUME=(PRIVATE,RETAIN,SER=&SERIAL3),                     00008300
//              DISP=(&DISP3),                                            00008400
//              SPACE=(&SPCUNIT,(&PRIMARY,&SECNDRY),RLSE)                 00008500
//*                                                                       00008600
//*  OUTPUT DATA SET - DIAGNOSTIC REPORT                                  00008700
//*                                                                       00008800
//EPSDIAG   DD SYSOUT=&OUT                                                00008900
//*                                                                       00009000
//*  OUTPUT DATA SET - INPUT MASTER FILE LISTING                          00009100
//*                                                                       00009200
//EPSOLDL   DD SYSOUT=&OUT                                                00009300
//*                                                                       00009400
//*  OUTPUT DATA SET - OUTPUT MASTER FILE LISTING                         00009500
//*                                                                       00009600
//EPSNEWL   DD SYSOUT=&OUT                                                00009700
//*                                                                       00009800
//*  OUTPUT DATA SET - OUTPUT TRANSACTIONS LISTING                        00009900
//*                                                                       00010000
//EPSTRNL   DD SYSOUT=&OUT                                                00010100
//*                                                                       00010200
//*  OUTPUT DATA SETS - SYSTEM OPERATION                                  00010300
//*                                                                       00010400
//SYSOUT    DD SYSOUT=&OUT                                                00010500
//*                                                                       00010600
//SYSPRINT  DD SYSOUT=&OUT                                                00010700
//*                                                                       00010800
//SYSUDUMP  DD SYSOUT=&OUT                                                00010900
//*                                                                       00011000
//SYSDTERM  DD SYSOUT=&OUT                                                00011100
//*                                                                       00011200
```

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Figure 6.2.2-i - continued. Cataloged Procedure EPRPM10

```
//SYSUDUMP  DD SYSOUT=&OUT                                              00011300
//*                                                                     00011400
//*                                                                     00011500
```

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Figure 6.2.2-i - continued. Cataloged Procedure EPRPM10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS. HQ.PNT.DATA.EPOLDMST would be the full data set name of the EIS/PS input master file)
PROGRAM	PRPENTR	Annual report program
REGION1	150K	Region size allocated for execution of PRPENTR
TIME1	'2,0'	Maximum time limit allocated for execution of PRPENTR
OLDMSTR	EPOLDMST	Lowest-level index of input master file
NEWMSTR	EPNEWMST	Lowest-level index of output master file
UNIT3	3330	Device type to which output master file is to be written
SERIAL3	CDHSPK	Volume serial number of volume to which output master file is to be written
DISP3	'NEW,CATLG,DELETE'	Disposition of output master file
SPCUNIT	TRK	Units in which space for output master file is to be allocated
PRIMARY	20	Primary space allocation for output master file
SECNDRY	10	Secondary space allocation for output master file

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Figure 6.2.2-j. Substitutable Parameters for EPRPM10

Parameter Name	Default Value	Description
OUT	A	SYSOUT class for all print files
TRANFL1	EPNEDS	Lowest-level index of output NEDS transaction file
TRANFL2	EPPOINT	Lowest-level index of output EIS/PS transaction file
UNIT1	2400	Device type to which output NEDS transaction file is to be written
UNIT2	2400	Device type to which output EIS/PS transaction file is to be written
SERIAL1	NEDTPE	Volume serial number of volume to which output NEDS transaction file is to be written
SERIAL2	PNTTPE	Volume serial number of volume to which output EIS/PS transaction file is to be written
DISP1	'NEW,KEEP'	Disposition of output NEDS transaction file
DISP2	'NEW,KEEP'	Disposition of output EIS/PS transaction file
LABEL1	1	Tape label number for NEDS transaction file
LABEL2	1	Tape label number for EIS/PS transaction file
LABCK1	NL	Type of tape labeling for NEDS transaction file
LABCK2	NL	Type of tapelabeling for EIS/PS transaction file

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Figure 6.2.2-j - continued. Substitutable Parameters for EPRPM10

6.3. FILE LISTINGS

6.3.1. INTRODUCTION

The master file or any answer file may be listed using the master file detailed report program, PRPMSTR (EP0210), or master fiel formatted dump program, PRPDUMP (EP0220).

PRPMSTR (EP0210) lists the master or answer file in a format suitable for a management report. See Figure 6.3.1-a for a flowchart of the master file detailed report.

PRPDUMP (EP0220) lists the master or answer file, record by record, with appropriate identifying headers. It is primarily used to verify the contents of the master file, especially when investigating a suspected EIS/PS malfunction. See Figure 6.3.1-b for a flowchart of the master file formatted dump.

PRPEFAC (EP0230) lists the information from the emission factor file. The emissions factor description file is used to provide narrative information for the report. See Figure 6.3.1-c for a flowchart of the emission file detailed report.

Detailed information on PRPMSTR (EP0210), PRPDUMP (EP0220), and PRPEFAC (EP0230) can be found in Sections 6.3.2, 6.3.3, and 6.3.4, respectively.

PRPMSTR (EP0210) can be executed using the cataloged procedure EPRPM20, which is discussed in Section 6.3.2.5; PRPDUMP (EP0220) by EPRPM30, discussed in Section 6.3.3.5; and PRPEFAC (EP0230) by EPRPE10, discussed in Section 6.3.4.5.

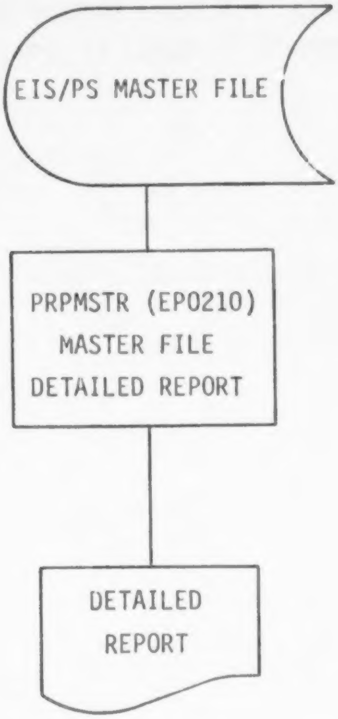


Figure 6.3.1-a. Master File Detailed Report Flowchart

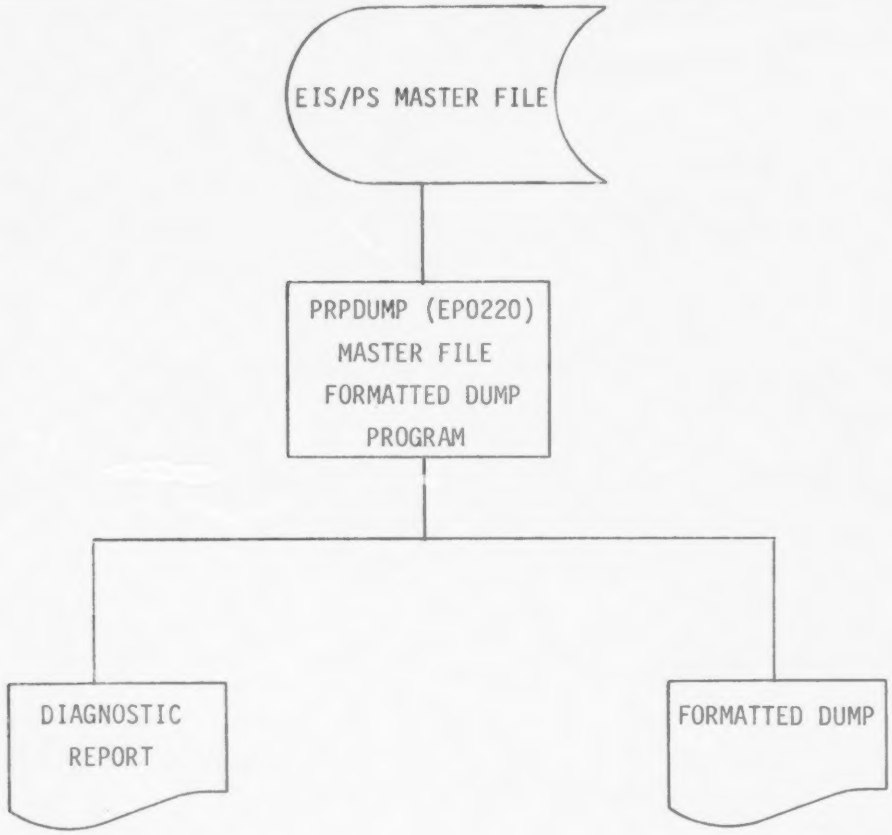


Figure 6.3.1-b. Master File Formatted Dump Flowchart

6.3.2 MASTER FILE DETAILED REPORT PROGRAM - PRPMSTR (EP0210)

6.3.2.1 Description

PRPMSTR (EP0210) produces a detailed report of the EIS/PS master (or answer) file. The master (or answer) file is listed with one point source record and its corresponding machine process records per page. Following each point source page, the corresponding permits and registration records are listed with one set of records per page. If a single plant has more than one point source or more than one set of permits and registration records, the plant/location information is repeated for each point source page and each permits and registration page. This program can be used to produce a detailed report of any file in EIS/PS master file format. For additional information about the EIS/PS master file refer to Section 4.3.9.

6.3.2.2 File Formats

Input to PRPMSTR (EP0210) consists of an EIS/PS master file or any file in EIS/PS master file format. See Figure 4.3.9-a for the EIS/PS master file format.

Two print files are output by PRPMSTR (EP0210): a diagnostic report (shown in Figure 6.3.2-a) and the master file detailed report (shown in Figure 6.3.2-b).

6.3.2.3 Options and Control Cards

There are no options.

6.3.2.4 Error Messages

There are no error messages.

6.3.2.5 Cataloged JCL

6.3.2.5.1 JCL listing - PRPMSTR (EP0210) can be run by executing the cataloged procedure EPRPM20. See Figure 6.3.2-c for a listing of this procedure.

6.3.2.5.2 Cross-reference of DD names and files

Program Name: PRPMSTR (EP0210)

DD Name	File Description	Input/Output
EPSMSTR	EIS/PS master (or answer) file	Input
EPSPRNT	Master file detailed report	Output
EPSDIAG	Diagnostic report	Output

6.3.2.5.3 User-supplied JCL - To execute the cataloged procedure EPRPM20, the user must supply a job card and specify the data set name of the input EIS/PS master (or answer) file. See Figure 6.3.2-d for a description of the procedure's substitutable parameters.

6.3.2.5.4 Sample run stream - The following run stream would produce an EIS/PS master file detailed report using the input EIS/PS master file 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMASTER'.

```
// EXEC  EPRPM20,
//        MSTRFIL=EPMASTER
/*
```

6.3.2.6 Warnings and Special Instructions

The report produced by PRPMSTR (EP0210) can be very lengthy and expensive to generate. If one expects a very large report, it is recommended that the substitutable parameter for execution time be increased, and the time and page limits set appropriately on the job card. At many computer installations, there is a limit set for the maximum number of pages which cannot be exceeded, even by a page limit on the job card, without special approval. See your computer systems people for information on this limit at your installation.

To reduce the size of the report (and thus the cost), it is recommended that a retrieval be run to select only those records which need to be printed. Information on retrievals can be found in Section 5.2.

6.3.2.7 Cost Considerations

The following estimates are for the execution of PRPMSTR (EP0210) on an IBM 370/168:

Number of master file records:	
Number of detailed report pages printed:	
CPU time:	.88 seconds
I/O time:	1.22 seconds
Total time:	2.10 seconds
Estimated cost:	$.29

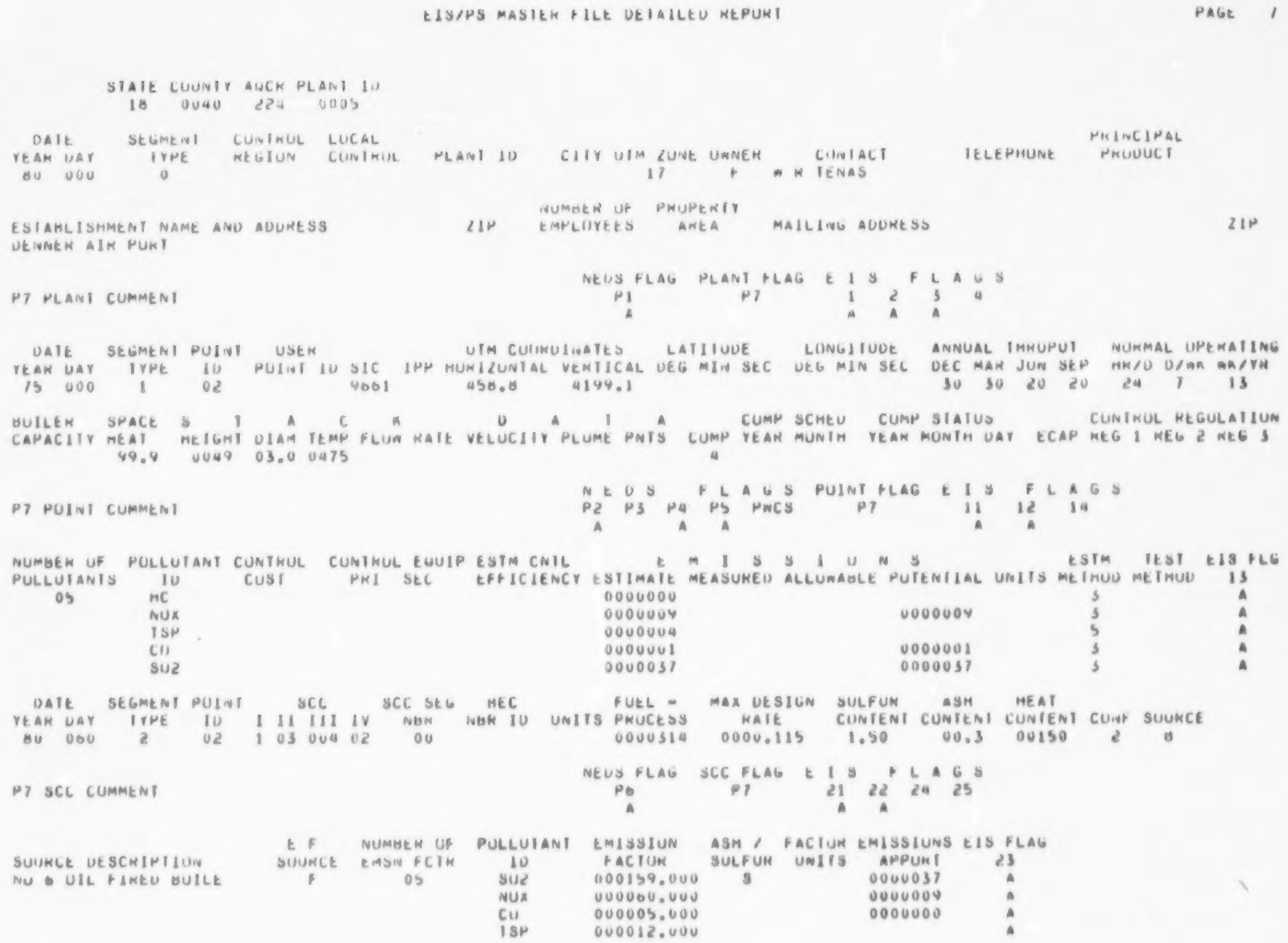
The report generated by PRPMSTR (EP0210) can be very lengthy, making the program expensive to run. To keep costs at a minimum, it is recommended that a retrieval be run to select only those records which need to be printed. See Section 5.2 for information on retrievals.

6.3.2.8 Related Programs and Procedures

There are no related program or procedures.

```
                    EIS/PS MASTER FILE DETAILED REPORT PROGRAM - DIAGNOSTIC REPORT                    PAGE 1

PROGRAM NAME: PRPMSTR (EP0210)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF SEGMENT 0 RECORDS PRINTED:          33
NUMBER OF SEGMENT 1 RECORDS PRINTED:          56
NUMBER OF SEGMENT 2 RECORDS PRINTED:          75
NUMBER OF SEGMENT 3 RECORDS PRINTED:          11
```

Figure 6.3.2-a. Diagnostic Report



```
                              EIS/PS MASTER FILE DETAILED REPORT                                        PAGE   7

       STATE COUNTY AQCR PLANT ID
        18    0040   224   0005

  DATE      SEGMENT   CONTROL  LOCAL                                                                    PRINCIPAL
YEAR DAY     TYPE     REGION   CONTROL    PLANT ID    CITY UTM ZONE OWNER     CONTACT        TELEPHONE    PRODUCT
 80  000      0                                             17      F    W R TENAS

                                                        NUMBER OF  PROPERTY
ESTABLISHMENT NAME AND ADDRESS              ZIP     EMPLOYEES    AREA      MAILING ADDRESS                       ZIP
DENNER AIR PORT

                                                         NEDS FLAG  PLANT FLAG  E I S   F L A G S
P7 PLANT COMMENT                                            P1          P7        1   2   3   4
                                                            A                     A   A   A

  DATE    SEGMENT POINT   USER                UTM COORDINATES    LATITUDE     LONGITUDE    ANNUAL THRUPUT   NORMAL OPERATING
YEAR DAY    TYPE   ID    POINT ID SIC  IPP HORIZONTAL VERTICAL DEG MIN SEC  DEG MIN SEC  DEC MAR JUN SEP   HR/D D/WK WK/YR
 75  000     1     02             9661        458.8     4199.1                           30  30  20  20    24    7    13

BOILER    SPACE  S    T    A    C    K           D    A    I    A         COMP SCHED   COMP STATUS          CONTROL REGULATION
CAPACITY  HEAT    HEIGHT DIAM TEMP FLOW RATE VELOCITY PLUME PNTS  COMP YEAR MONTH  YEAR MONTH DAY  ECAP REG 1 REG 2 REG 3
         99.9     0049  03.0 0475                                   4

                                                         N E D S    F L A G S  POINT FLAG  E I S   F L A G S
P7 POINT COMMENT                                         P2  P3  P4  P5  PWCS       P7        11   12   14
                                                         A       A   A                        A    A

NUMBER OF  POLLUTANT CONTROL   CONTROL EQUIP ESTM CNTL        E  M  I  S  S  I  O  N  S              ESTM    TEST  EIS FLG
POLLUTANTS    ID      COST       PRI  SEC    EFFICIENCY ESTIMATE MEASURED ALLOWABLE POTENTIAL UNITS METHOD METHOD   13
   05         HC                                         0000000                                      5               A
              NOX                                        0000009                    0000009           5               A
              TSP                                        0000004                                      5               A
              CO                                         0000001                    0000001           5               A
              SO2                                        0000037                    0000037           5               A

  DATE    SEGMENT POINT      SCC       SCC SEG   HEC            FUEL -   MAX DESIGN  SULFUR    ASH     HEAT
YEAR DAY    TYPE   ID    I II III IV    NBR    NBR ID  UNITS PROCESS      RATE     CONTENT CONTENT CONTENT CONF SOURCE
 80  060     2     02    1 03 004 02    00                    0000314   0000.115     1.50    00.3   00150    2     0

                                                         NEDS FLAG  SCC FLAG  E I S   F L A G S
P7 SCC COMMENT                                              P6         P7       21  22  24  25
                                                            A                   A   A

                              E F    NUMBER OF  POLLUTANT  EMISSION   ASH /  FACTOR EMISSIONS EIS FLAG
SOURCE DESCRIPTION           SOURCE  EMSN FCTR     ID       FACTOR    SULFUR  UNITS   AMOUNT     23
NO 6 OIL FIRED BOILE           F        05        SO2     000159.000    S            0000037      A
                                                  NOX     000060.000                 0000009      A
                                                  CO      000005.000                 0000000      A
                                                  TSP     000012.000                              A
```

(Page 1 of 2)

Figure 6.3.2-b. EIS/PS Master File Detailed Report

```
                       EIS/PS MASTER FILE DETAILED REPORT                            PAGE    5

        STATE COUNTY AQCR PLANT ID
          06    1960   053   0001

SEGMENT POINT SEQ
  TYPE    ID   NBR
   3      01    02

 DATE   LINE  EIS  COMMENT
YR DAY  NBR FL 30
80 065  001   A   THIS COMMENT ADDED 03/21/80
80 065  021   C   PLANT NOW FOLLOWING GUIDELINES AS SET DOWN 12/14/79  WILL NOT BE CITED FOR VIOLATIONS
80 065  022   A   THIS IS THE END OF THIS COMMENT
```

(Page 2 of 2)

Figure 6.3.2-b - continued. EIS/PS Master File Detailed Report

```
//* EPALMH/A087 HEDGEPETH, LLOYD M. (919) 541-5491
//*
//*    PROCEDURE NAME: EPRPM20
//*    REVISION LEVEL: 1-00
//*    LAST UPDATE #: P-1
//*    DATE INCORPORATED: FEBRUARY 1, 1980
//*
//*    THIS PROCEDURE ALLOWS THE USER TO GENERATE A DETAILED LISTING OF
//*    THE EIS/PS MASTER FILE
//*
//*
//EPRPM20 PROC PROJECT='CN.EPALMH.A087.CDHS.HQ.PN1',
//             PROGRAM=PRPMSTR,
//             MSTRFIL=EPMASTER,
//             REGION1=64K,
//             TIME1='1,0',
//             OUT=A
//*
//REPORT EXEC  PGM=&PROGRAM,
//             REGION=&REGION1,
//             TIME=(&TIME1)
//STEPLIB  DD  DSNAME=&PROJECT..LOAD,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//*
//* INPUT DATA SET - EIS/PS MASTER FILE
//*
//EPSMSTR  DD DSNAME=&PROJECT..DATA.&MSTRFIL,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//*
//* OUTPUT DATA SET - DIAGNOSTIC REPORT
//*
//EPSDIAG  DD SYSOUT=&OUT
//*
//* OUTPUT DATA SET - DETAILED LISTING OF EIS/PS MASTER FILE
//*
//EPSPRNT  DD SYSOUT=&OUT
//*
//* OUTPUT DATA SETS - SYSTEM OPERATION
//*
//SYSPRINT DD SYSOUT=&OUT
//*
//SYSOUT   DD SYSOUT=&OUT
//*
//SYSDBOUT DD SYSOUT=&OUT
//*
//SYSDTERM DD SYSOUT=&OUT
//*
//SYSUDUMP DD SYSOUT=&OUT
//*
```

Figure 6.3.2-c. Cataloged Procedure EPRPM20

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA. EPMASTER would be the full data set name of an EIS/PS master file)
PROGRAM	PRPMSTR	Master file detailed report program
MSTRFIL	EPMASTER	Lowest-level index of input EIS/PS master file
REGION1	64K	Region size allocated for execution of PRPMSTR (EP0210)
TIME1	'1,0'	Time allocated for execution of PRPMSTR (EP0210)
OUT	A	SYSOUT class for all print files

Figure 6.3.2-d. Substitutable Parameters for EPRPM20

6.3.3 MASTER FILE FORMATTED DUMP PROGRAM - PRPDUMP (EP0220)

6.3.3.1 Description

PRPDUMP (EP0220) produces a formatted dump of the EIS/PS master file; i.e., a listing with identifying headings of all the fields in each master file record, as the record appears in the file. PRPDUMP (EP0220) may also be used to produce a formatted dump of any EIS/PS answer file. This formatted dump provides the user a means of verifying information contained in a master (or answer) file and isolating invalid data.

6.3.3.2 File Formats

Input to PRPDUMP (EP0220) consists of an EIS/PS master (or answer) file. See Figure 4.3.9-a for the EIS/PS master file format.

Output consists of a printed report containing the EIS/PS master file dump and the diagnostic report. Sample output from both reports are shown in Figures 6.3.3-a and 6.3.3-b, respectively.

6.3.3.3 Options and Control Cards

There are no options.

6.3.3.4 Error Messages

There are no error messages.

6.3.3.5 Cataloged JCL

6.3.3.5.1 JCL listing - PRPDUMP (EP0220) can be run by executing the cataloged procedure EPRPM30. See Figure 6.3.3-c for a listing of this procedure.

6.3.3.5.2 Cross-reference of DD names and files

Program name: PRPDUMP (EP0220)

DD Name	File Description	Input/Output
EPSMSTR	EIS/PS master (or answer) file	Input
EPSPRNT	EIS/PS master file dump	Output
EPSDIAG	Diagnostic report	Output

6.3.3.5.3 User-supplied JCL - To execute the cataloged procedure EPRPM30, the user must supply a job card and specify the data set name of the input EIS/PS master (or answer) file. See Figure 6.3.3-d for a description of the procedure's substitutable parameters.

6.3.3.5.4 Sample run stream - The following run stream would produce an EIS/PS master file dump using the input EIS/PS master file 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMASTER'.

```
// EXEC  EPRPM30,
//       MSTRFIL=EPMASTER
/*
```

6.3.3.6 Warnings and Special Instructions

The dump produced by PRPDUMP (EP0220) can be very lengthy; therefore, it is recommended that the substitutable parameter for execution time be increased and that the time and page limits be set appropriately on the job card. At many computer installations, there is a limit set for the maximum number of pages which cannot be exceeded, even by a page limit on the job card, without special approval. See your computer systems personnel for information on this limit at your installation.

To reduce the size of the report, it is recommended that a retrieval be run to select only those records which need to be printed. Information on retrievals can be found in Section 5.2.

6.3.3.7 Cost Considerations

The following estimates are for the execution of PRPDUMP (EP0220) on an IBM 370/168:

Number of master file records:	172 records
CPU time:	.76 seconds
I/O time:	1.06 seconds
Total time:	1.82 seconds
Estimated cost:	$.25

The dump which is generated by this program can be very lengthy, making the program expensive to run. To keep costs at a minimum, it is recommended that a retrieval be run to select only those records which need to be printed. See Section 5.2 for information on retrievals.

6.3.3.8 Related Programs and Procedures

There are no related programs or procedures.

```
                                      EIS/PS MASTER FILE DUMP                                                          PAGE    1

------------------------------------------------------------------------------------------------------------------------------
                                                                    KEY=06196005300000001000000000000000000000292
PLANT #      1
ST/CD=06 CY/CD=1960 AQCR/#=055 PL/ID=0001 DT=80047 USR/CNTL/RG=125 LCL/CNTL=04 USR/PL/ID=PL-3175       CTY=0012 UTM/ZN=12 UNRSHP=P
CNTCT=FRANKE SMYTHE    PHN=5919544376 NM/ADDR=SYMTHE ENGINE CO                              PRD=9ENGINES   EMP=0014 AREA=000019
MLG/ADDR=RED OAKE, COLORADO                                   P1/FL=A P7/CMTS=PLANT NOT IN PRODUCTION 12/79 THRU /4/80
P7/FL=A EIS FLAGS:  1=A 2=A 3=A 4=A
------------------------------------------------------------------------------------------------------------------------------
                                                                    KEY=06196005300000001000110000000000000000346
  POINT SOURCE  01
   SEG/DT=80047 USR/PT/ID=011 SIC/CD=1141 IPP/CD=21 UTM/HORZ=2054 UTM/VERT=09555 LAT=712121 LNG=0515152 IHRPT=02030301
   NRML/UPER=10547 HOLR/CAPC=00137 SPC/HT=097 STCK/HGHT=0090 STCK/DIAM=010 STCK/TMP=0100 FLW/RT=0000123 VLOCTY=00150 PLM/HGHT=0900
   PIS/CM/STK=      COMPLCE/STAT=2 COMPLCE/SCH=8110 COMPLCE/UPD=791215 ECAP=1 CNTRL/REGUL=  44  15  17 P2-P5/FLGS=AAAA PNCS/FL=
   P7/CMTS=POINT ADDED 12/14/79                                  P7/FL=A EIS FLAGS:  11=A 12=A 14=A #/POLL=02
   **  POLL/ID  EQP/CST  PRI/EQP  SEC/EQP  CNTL/EF  EMIS/EST  EMIS/MEAS  ALLOW/EMIS  UNCNTL/EMIS  EM/UTS EST/MT TS/MT EIS/FL/13  **
   **   42101   0000100    022      041      985    0000100    0000200    0000300                   4      3      3        A      **
   **   11101   0000100    022      041      985    0000100    0000200    0000300                   4      3      3        A      **
------------------------------------------------------------------------------------------------------------------------------
                                                                    KEY=06196005300000001000124030010100000000294
      SCC   40300101    SEQ NBR   00
       SEG/DT=80047 BFC=12301 FUEL/UTS=2 FUEL/PRC=0003000 MAX/DESGN=0004000 SUL/CT=578 ASH/CT=023 HEAT/CT=00150 CNFD/DT=1 SC/CD=R
       SC/DSC=ENGINE                      E/F/SC=R P6/FL=A P7/CMTS=SCC LEFT COMMENT P7         SCC RIGHT P7 COMMENT          P7/FL=A
                                                                                                                            #/E/F=04
       EIS/FLAGS:  21=A 22=A 24=A 25=A
       ** POLL/ID  EMIS/FCTR A/S/CD E/F/UTS APPRT/EMIS EIS/FL/23              POLL/ID  EMIS/FCTR A/S/CD E/F/UTS APPRT/EMIS EIS/FL/23 **
       **  82602   000000000          2                  A                    42101   000000000          1      0000000       A      **
       **  22104   000000230          2                  A                    11101   000000000          1      0000000       A      **
------------------------------------------------------------------------------------------------------------------------------
                                                                    KEY=06196005300000001000124030010202000000298
      SCC   40300102    SEQ NBR  02
       SEG/DT=80047 BFC=12301 FUEL/UTS=2 FUEL/PRC=0003000 MAX/DESGN=0004000 SUL/CT=023 ASH/CT=012 HEAT/CT=00150 CNFD/DT=1 SC/CD=R
       SC/DSC=ENGINE                      E/F/SC=R P6/FL=A P7/CMTS=SCC LEFT COMMENT P7                                        P7/FL=A
                                                                                                                            #/E/F=04
       EIS/FLAGS:  21=A 22=A 24=A 25=
       ** POLL/ID  EMIS/FCTR A/S/CD E/F/UTS APPRT/EMIS EIS/FL/23              POLL/ID  EMIS/FCTR A/S/CD E/F/UTS APPRT/EMIS EIS/FL/23 **
       **  11101   000000050   A      1      0000000     A                    82602   000000000          2                     A      **
       **  42101   000000080   8      1      0000000     A                    22104   000000100          2                     A      **
------------------------------------------------------------------------------------------------------------------------------
      PERMITS & REGISTRATION 02                                     KEY=06196005300000001000130000000000000020210172
                                                                                                                          EIS **
       **  SEG  LINE                                                                                                     FLAG **
       **  DATE  NBR                                                                                                      30  **
       ** 80047   21  PLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79 WILL BE CITED 3/1/80                              A  **
------------------------------------------------------------------------------------------------------------------------------
                                                                    KEY=06196005300000001012710000000000000000346
  POINT SOURCE  10
   SEG/DT=80113 USR/PT/ID=011 SIC/CD=1141 IPP/CD=21 UTM/HORZ=2454 UTM/VERT=09555 LAT=712121 LNG=0515152 IHRPT=02030301
   NRML/UPER=10547 HOLR/CAPC=00137 SPC/HT=097 STCK/HGHT=0090 STCK/DIAM=010 STCK/TMP=0100 FLW/RT=0000123 VLOCTY=00151 PLM/HGHT=0900
   PIS/CM/STK=      COMPLCE/STAT=2 COMPLCE/SCH=8110 COMPLCE/UPD=791215 ECAP=1 CNTRL/REGUL=  44  15  17 P2-P5/FLGS=AAAA PACS/FL=
   P7/CMTS=POINT ADDED 12/14/79                                  P7/FL=A EIS FLAGS:  11=A 12=A 14=A #/POLL=02
   **  POLL/ID  EQP/CST  PRI/EQP  SEC/EQP  CNTL/EF  EMIS/EST  EMIS/MEAS  ALLOW/EMIS  UNCNTL/EMIS  EM/UTS EST/MT TS/MT EIS/FL/13  **
   **   42101   0000100    022      041      985    0000100    0000200    0000300                   4      3      3        A      **
   **   11101   0000100    022      041      985    0000100    0000200    0000300                   4      3      3        A      **
```

Figure 6.3.3-a. EIS/PS Master File Formatted Dump

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087.CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMASTER would be the full data set name of an EIS/PS master file)
PROGRAM	PRPDUMP	Master file formatted dump program
REGION1	60K	Region size allocated for execution of PRPDUMP (EP0220)
TIME1	'1,0'	Time allocated for execution of PRPDUMP (EP0220)
MSTRFIL	EPMASTER	Lowest-level index of input EIS/PS master file
OUT	A	SYSOUT class for all print files

Figure 6.3.3-d. Substitutable Parameters for EPRPM30

6.3.4 EMISSION FACTOR FILE DETAILED REPORT PROGRAM - PRPEFAC (EP0230)

6.3.4.1 Description

PRPEFAC (EP0230) produces a detailed report of the EIS/PS emission factor file and the EIS/PS emission factor description file. The report is printed in ascending order by SCC number. The emission factor description record for each SCC is printed first, followed by all of the emission factor file records that contain a matching SCC number.

Each SCC group is further subdivided by ORIGIN/SOURCE combinations as they appear in the emission factor file. Each group of emission factor file records that contains the same ORIGIN/SOURCE combination is preceded by a record containing a pollutant ID of zero. This record contains the ash and sulfur contents for the ORIGIN/SOURCE combination. Each record that is subordinate to the zero pollutant record contains an ash/sulfur flag to indicate which value, ash content or sulfur content, is used in computations, an 'A' indicates ash, an 'S' indicates sulfur, and a blank indicates that neither value is used.

Each ORIGIN/SOURCE combination can contain a maximum of seventeen records; one record with a zero pollutant ID, followed by sixteen pollutant records.

```
                    EIS/PS MASTER FILE FORMATTED DUMP PROGRAM - DIAGNOSTIC REPORT                    PAGE    1

PROGRAM NAME: PRPDUMP (EP0220)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980


PLANT (SEGMENT 0) RECORD COUNT:                                              33
POINT SOURCE (SEGMENT 1) RECORD COUNT:                                       56
POINT SOURCE POLLUTANT COUNT:                                               260
MACHINE PROCESS (SEGMENT 2) RECORD COUNT:                                    75
MACHINE PROCESS POLLUTANT COUNT:                                            301
PERMITS & REGISTRATION (SEGMENT 3) RECORD COUNT:                              8

AVERAGE NUMBER OF POINT SOURCES PER PLANT:                                  1.7
AVERAGE NUMBER OF POLLUTANTS PER POINT SOURCE:                              4.6
AVERAGE NUMBER OF MACHINE PROCESSES PER POINT SOURCE:                       1.3
AVERAGE NUMBER OF POLLUTANTS PER MACHINE PROCESS:                           4.0
AVERAGE NUMBER OF PERMITS & REGISTRATION SEGMENTS PER POINT SOURCE:         0.1

TOTAL NUMBER OF RECORDS READ:                                               172
NUMBER OF ERRORS DETECTED:                                                    0
NUMBER OF PAGES IN REPORT:                                                   33
```

Figure 6.3.3-b. Diagnostic Report

```
//* EPALMH/A087 HEDGEPETH, LLOYD M. (919) 541-5491
//*
//*    PROCEDURE NAME: EPRPM30
//*    REVISION LEVEL: 1-00
//*    LAST UPDATE #: P-1
//*    DATE INCORPORATED: FEBRUARY 1, 1980
//*
//*    THIS PROCEDURE ALLOWS THE USER TO GENERATE A FORMATTED DUMP OF
//*    THE EIS/PS MASTER FILE
//*
//*
//EPRPM30 PROC  PROJECT='CH.EPALMH.A087.CDHS.HQ.PNT',
//              PROGRAM=PRPDUMP,
//              REGION1=60K,
//              TIME1='1,0',
//              MSTRFIL=EPMASTER,
//              OUT=A
//*
//DUMP     EXEC  PGM=&PROGRAM,
//              REGION=&REGION1,
//              TIME=(&TIME1)
//STEPLIB    DD DSNAME=&PROJECT..LOAD,
//              VOLUME=(PRIVATE,RETAIN),
//              DISP=(SHR,PASS)
//*
//* INPUT DATA SET - EIS/PS MASTER FILE
//*
//EPSMSTR    DD DSNAME=&PROJECT..DATA.&MSTRFIL,
//              VOLUME=(PRIVATE,RETAIN),
//              DISP=(SHR,PASS)
//*
//* OUTPUT DATA SET - DIAGNOSTIC REPORT
//*
//EPSDIAG    DD SYSOUT=&OUT
//*
//* OUTPUT DATA SET - FORMATTED DUMP OF EIS/PS MASTER FILE
//*
//EPSPRNT    DD SYSOUT=&OUT
//*
//* OUTPUT DATA SETS - SYSTEM OPERATION
//*
//SYSPRINT   DD SYSOUT=&OUT
//*
//SYSOUT     DD SYSOUT=&OUT
//*
//SYSDBOUT   DD SYSOUT=&OUT
//*
//SYSOTERM   DD SYSOUT=&OUT
//*
//SYSUDUMP   DD SYSOUT=&OUT
//*
//*
```

Figure 6.3.3-c. Cataloged Procedure EPRPM30

6.3.4.2 File Formats

Input to the program consists of the EIS/PS emission factor file and the EIS/PS emission factor description file. The control dates and generation numbers from the file header records must match, or program execution will be terminated. See Figure 4.2.5-a for a description of the emission factor file and Figure 4.2.5-b for a description of the emission factor description file.

Output from the program is the detailed report containing emission factor information in a formatted listing and diagnostic messages indicating input record counts, pollutant counts by origin, and the number of pages in the report. See Figure 6.3.4-a for a sample detailed report.

6.3.4.3 Options and Control Cards

There are no options or control cards.

6.3.4.4 Error Messages

PRPEFAC 001 ABORT - DESCRIPTION FILE NOT PRESENT

Meaning: There are no records in the emission factor description file. Program execution was terminated.

Action: Insure that the proper file is being used and resubmit the job.

PRPEFAC 002 ABORT - EMISSION FACTOR FILE NOT PRESENT

Meaning: There are no records in the emission factor file. Program execution was terminated.

Action: Insure that the proper file is being used and resubmit the job.

PRPEFAC 003 ABORT - DESCRIPTION FILE HEADER RECORD NOT PRESENT

Meaning: The emission factor description file does not contain a header record. Program execution was terminated.

Action: Insure that the proper file is being used and resubmit the job.

PRPEFAC 004 - EMISSION FACTOR FILE HEADER RECORD NOT PRESENT

Meaning: The emission factor file does not contain a header record. Program execution was terminated.

Action: Insure that the proper file is being used and resubmit the job.

PRPEFAC 005 ABORT - CONTROL FIELDS ON HEADER RECORDS OF THE INPUT FILES DO NOT MATCH

Meaning: The header records from the input files do not match; therefore, it is possible that the files do not coincide. Program execution was terminated.

Action: Supply the appropriate file names and resubmit the job.

6.3.4.5 Cataloged JCL - EPRPE10

6.3.4.5.1 JCL listing - PRPEFAC (EP0230) is executed by the cataloged procedure EPRPE10. See Figure 6.3.4-b for a listing of this procedure.

6.3.4.5.2 Cross-reference of DD names and files

Program Name: PRPEFAC (EP0230)

DD Name	File Description	Input/Output
EPSDESC	EIS/PS emission factor description file	Input
EPSEMFC	EIS/PS emission factor file	Input
EPSPRNT	Detailed report	Output

6.3.4.5.3 User-supplied JCL - The user must supply job accounting information and the data set names of the emission factor description file and the emission factor file. See Figure 6.3.4-c for a description of the procedure's substitutable parameters.

6.3.4.5.4 Sample run stream -The following run stream would produce a detailed report of an emission factor file and an emission factor description file. The names of the input files are their respective default values.

```
// EXEC EPRPE10
```

6.3.4.6 Warnings and Special Instructions

The user must insure that the emission factor file and the emission factor description file being used as input to PRPEFAC (EP0230) were created by the same file maintenance run. The files must coincide, or program execution will be terminated.

6.3.4.7 Cost Considerations

The estimates listed below are based on the execution of the run stream in Section 6.3.4.5.4 on an IBM 370/168:

Emission factor file records read:	638 records
Emission factor description file records read:	101 records
CPU time:	.66 seconds
I/O time:	1.18 seconds
Total time:	1.84 seconds
Estimated cost:	$.26

6.3.4.8 Related Programs and Procedures

There are no related programs or procedures.

```
                              EIS/PS EMISSION FACTOR FILE LISTING                                    PAGE    22


                   UNITS  1000 GALLONS TRANSFERRED

   FEDERAL      POLL ID 00000                            DATE 80057  CNTL 80057  CONTENTS: ASH=    , SULFUR=
                POLL ID 11101  PARTICULATE FACTOR        DATE 80057  EMF       0.000
                POLL ID 42101  CO FACTOR                 DATE 80057  EMF       0.000
                POLL ID 42401  SO2 FACTOR                DATE 80057  EMF       0.000
                POLL ID 42602  NOX FACTOR                DATE 80057  EMF       0.000

SCC 40600198 DATE 80057 CAT1 PETROLEUM MARKING CAT2 TANK CARS/TRUCKS  CAT3 NOT CLASSIFIED    CAT4 SEE COMMENT    **
                   UNITS  1000 GALLONS TRANSFERRED

   FEDERAL      POLL ID 00000                            DATE 80057  CNTL 80057  CONTENTS: ASH=    , SULFUR=
                POLL ID 11101  PARTICULATE FACTOR        DATE 80057  EMF       0.000
                POLL ID 42101  CO FACTOR                 DATE 80057  EMF       0.000
                POLL ID 42401  SO2 FACTOR                DATE 80057  EMF       0.000
                POLL ID 42602  NOX FACTOR                DATE 80057  EMF       0.000
-------------------------------------------------- END OF FILE LISTING --------------------------------------------------

                             EIS/PS EMISSION FACTOR FILE LISTING SUMMARY                              PAGE     1


HEADER RECORD CONTROL FIELDS

                CONTROL DATE IS 80062, PREVIOUS DATE IS 80057, GENERATION NUMBER IS      2

DESCRIPTION FILE RECORD COUNT:          101

EMISSION FACTOR FILE RECORD COUNT:      638

NUMBER OF SCCS IN LIST:                 100

NUMBER OF POLLUTANT ENTRIES IN LIST:    637
   FEDERAL POLLUTANT ENTRIES:           533
   STATE POLLUTANT ENTRIES:              37
   LOCAL POLLUTANT ENTRIES:              67

NUMBER OF ERRORS DETECTED:                0

NUMBER OF PAGES IN REPORT:               22
```

Figure 6.3.4-a. Emission Factor File Detailed Report

```
//* EPALMH/A087 HEDGEPETH, LLOYD M. (919) 541-5491                          00000100
//*                                                                         00000200
//*   PROCEDURE NAME: EPRPE10                                               00000300
//*   REVISION LEVEL: 1-00                                                  00000400
//*   LAST UPDATE #: P-1                                                    00000500
//*   DATE INCORPORATED: FEBRUARY 1, 1980                                   00000600
//*                                                                         00000700
//*   THIS PROCEDURE ALLOWS THE USER TO GENERATE A DETAILED LISTING OF      00000800
//*   THE EIS/PS EMISSION FACTOR FILE                                       00000900
//*                                                                         00001000
//*                                                                         00001100
//EPRPE10 PROC PROJECT='CO.EPALMH.A087.CDHS.HQ.PNT',                        00001200
//             PROGRAM=PRPEFAC,                                             00001300
//             REGION1=150K,                                                00001400
//             TIME1='1,0',                                                 00001500
//             EMFCFIL=EPEMSFAC,                                            00001600
//             DESCFIL=EPDESCRP,                                            00001700
//             OUT=A                                                        00001800
//*                                                                         00001900
//*                                                                         00002000
//REPORT  EXEC PGM=&PROGRAM,                                                00002100
//             REGION=&REGION1,                                             00002200
//             TIME=(&TIME1)                                                00002300
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                                       00002400
//             VOLUME=(PRIVATE,RETAIN),                                     00002500
//             DISP=(SHR,PASS)                                              00002600
//*                                                                         00002700
//* INPUT DATA SET - EIS/PS EMISSION FACTOR FILE                            00002800
//*                                                                         00002900
//EPSEMFC   DD DSNAME=&PROJECT..DATA.&EMFCFIL,                              00003000
//             VOLUME=(PRIVATE,RETAIN),                                     00003100
//             DISP=(SHR,PASS)                                              00003200
//*                                                                         00003300
//* INPUT DATA SET - EIS/PS EMISSION FACTOR DESCRIPTION FILE                00003400
//*                                                                         00003500
//EPSDESC   DD DSNAME=&PROJECT..DATA.&DESCFIL,                              00003600
//             VOLUME=(PRIVATE,RETAIN),                                     00003700
//             DISP=(SHR,PASS)                                              00003800
//*                                                                         00003900
//* OUTPUT DATA SET - DETAILED LISTING OF EIS/PS EMISSION FACTOR FILE       00004000
//*                       AND DIAGNOSTIC REPORT                             00004100
//*                                                                         00004200
//EPSPRG1   DD SYSOUT=&OUT                                                  00004300
//*                                                                         00004400
//* OUTPUT DATA SETS - SYSTEM OPERATION                                     00004500
//*                                                                         00004600
//SYSPRINT  DD SYSOUT=&OUT                                                  00004700
//*                                                                         00004800
//SYSOUT    DD SYSOUT=&OUT                                                  00004900
//*                                                                         00005000
//SYSDBOUT  DD SYSOUT=&OUT                                                  00005100
//*                                                                         00005200
//SYSOUTFS  DD SYSOUT=&OUT                                                  00005300
//*                                                                         00005400
//SYSUDUMP  DD SYSOUT=&OUT                                                  00005500
//*                                                                         00005600
//*                                                                         00005700
```

Figure 6.3.4-b. Cataloged Procedure EPRPE10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087.CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPEMSFAC would be the full data set name of the input emission factor file)
PROGRAM	PRPEFAC	Emission factor file detailed report program
REGION1	100K	Region size allocated for execution of PRPEFAC
TIME1	'1,0'	Time (minutes, seconds) allocated for execution of PRPEFAC
EMFCFIL	EPEMSFAC	Lowest-level index of input emission factor file
DESCFIL	EPDESCRP	Lowest-level index of input emission factor description file
OUT	A	SYSOUT class for all print files

Figure 6.3.4-c. Substitutable Parameters for EPRPE10

6.4. SUMMARY REPORT

6.4.1. INTRODUCTION

One summary report programs is available for the EIS/PS master file: the master file emissions projection program, PRPEPRJ (EP0250).

PRPEPRJ (EP0250) calculates emissions-related information and produces a projected master file containing that information. The calculations are based on the projection information entered by control cards. Projections may be made by SCC, by plant-point key, or to all records (for a fixed amount). In addition to the master file, a report showing the emissions is produced. See Figure 6.4.1-a for a flowchart of the master file emissions projection.

Sections 6.4.2 contain a detailed discussion of PRPEPRJ (EP0250).

The cataloged procedure EPRPM50, which is discussed in Section 6.4.2.5, executes PRPEPRJ (EP0250).

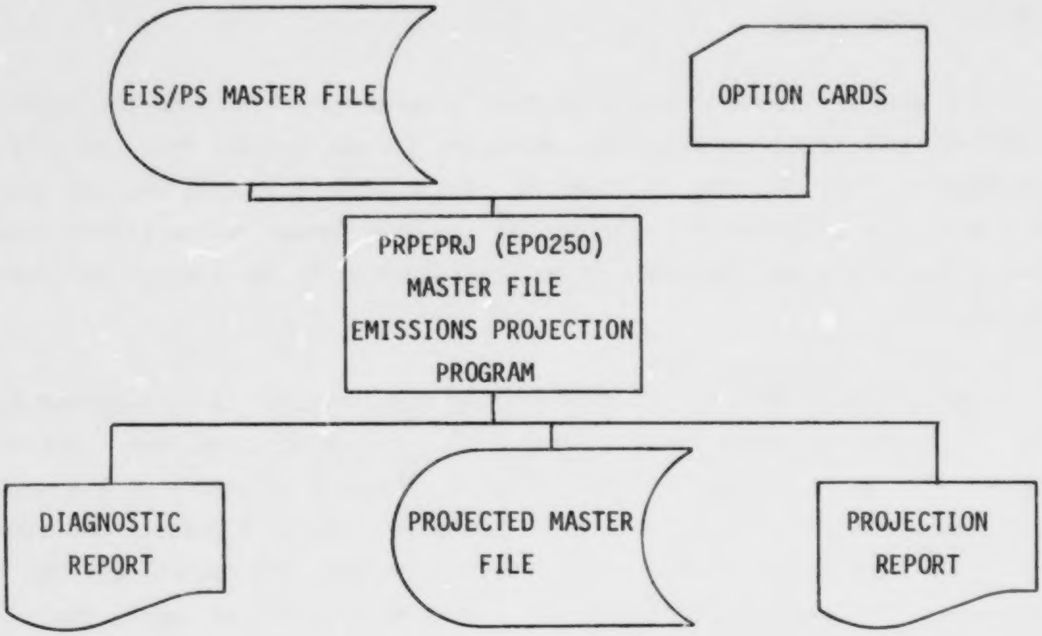


Figure 6.4.1-a. Master File Emissions Projection Flowchart

6.4.2 MASTER FILE EMISSIONS PROJECTION PROGRAM - PRPEPRJ (EP0250)

6.4.2.1 Description

The master file emissions projection program uses data from the EIS/PS master file to calculate projected emissions for the current five criteria pollutants: TSP, SO_2, NO_x, HC, and CO. These projected emissions are output in a projected emissions file, which has the same format as the EIS/PS master file. The projected file can also be used as input to the program for further projections.

The type of projection is dependent upon the control cards supplied by the user. These control cards provide the user with three options. Option 1 enables the user to modify all the criteria pollutant emissions in the master file by a fixed percentage increase or decrease. Option 2 enables the user to modify the fuel process rate, ash and sulfur content, and control device efficiency for specific SCC's. Option 3 enables the user to modify the criteria pollutant emissions by a fixed percentage increase or decrease for selected plant/point combinations.

When PRPEPRJ (EP0250) is executed, all segment 0, segment 1, and segment 2 records from the input master file are output to the projection file. The segment 0 records are output unchanged. The projected value of the emissions estimate is changed in any segment 1 record which meets the specifications set forth in the control cards; otherwise, the emission is the same as that in the input file. If the SCC option (option 2) has been specified, information from the SCC control cards will replace the incoming information from the input master file in the segment 1 and segment 2 records for the selected SCC's.

Whenever projected values are calculated for emissions, the uncontrolled emissions (those emissions that would occur if their associated control device efficiencies were zero) are calculated. The values for the uncontrolled emissions are stored in the corresponding 'EMISSIONS-POTENTIAL' fields of the output segment 1 records.

A segment 3 record is generated for each plant (segment 0) in which emissions have been projected. If no emissions were changed for a plant, a check is made on the segment 3 records. If a segment 3 record was produced by an earlier run of the emissions projection program, it will be output; otherwise, no segment 3 record will be written to the projection file for that plant. The generated segment 3 record indicates which type of projection was run. In addition, header records with keys containing all zeroes are output to indicate that the file was created by the emissions projection program.

When the first option is specified, emissions for all points in all plants in the input file are changed by the percentage specified on the type-1 control card. This percentage acts as an additive percentage change. For example, an emissions change of 020 (20%) would increase an emission from 10 to 12, and an emissions change of -020 (-20%) would decrease an emission from 10 to 8.

The second option is SCC specific and, therefore, is more selective. Actual values or percentage changes of the fuel process rate, ash and sulfur content, and control device efficiency can be specified for selected SCC's. Coding an actual value for a field excludes the possibility of coding a change for that field. Also, to use a change field on the control card, one must not code an actual value for that same element.

The SCC's from the master file associated with each point are checked against those SCC's input on the control cards. If a match of SCC's occurs, the point is selected for projection and the emissions will be calculated for all criteria pollutants associated with that point. This procedure is then repeated for all points subordinate to the plant and for all plants in the input master file.

Once the point has been selected for projection, calculations are performed on all specified SCC's related to that point regardless of the estimation method. Therefore, it is possible that the calculated values may differ greatly from the present values if the present estimation method is not 3. If any SCC/pollutant combination lacks all information needed to perform the calculation, or if the final estimate is calculated to be zero, an error message will be printed and the present emission will be output to the projection file. If the control device efficiency is missing from the input file record, a value of zero will be used and the calculation will be performed.

Actual values coded for the fuel process rate, ash and sulfur content, and control device efficiency replace the incoming values for the corresponding segment 1 and segment 2 records. A change value coded for the fuel process rate acts as an additive percentage change; thus, a fuel process change of 010 (10%) would increase a fuel process rate from 20 to 22, and a fuel process change of -010 (-10%) would decrease a fuel process rate from 20 to 18. The change values coded for ash content, sulfur content, and control device efficiency are percentage values which are directly additive to the existing percentage values for these fields; that is, if a 020 (2%) CDEF increase was entered on the control card, it would increase a CDEF of 95% to

97%, and it would decrease the CDEF to 93% if a -020 was coded on the control card. In no case is the resultant percentage allowed to be less than 0 for these fields. The calculated values for ash content, sulfur content, and control device efficiency must not be greater than 99.9, 9.99, and .999, respectively. If any one of these values exceeds its maximum, that field will be left unchanged and no calculations will be performed.

The third option allows fixed percentage changes to be calculated for selected plant/point combinations. The criteria pollutant emissions for a given plant can be modified without performing the calculations involving emission factor, fuel process rate, ash content, sulfur content, and control device efficiency. This can be useful for cleaning up points which had problems in a previous emissions projection run where the SCC option was used. The problems could have occurred due to insufficient data in the input file record or to a size error problem (the estimated emission was too large or too small to be contained in the field). The fixed percentage coded on the control card is a percentage change ranging from -99% (decrease) to 999% (increase). This value acts as an additive percentage change identical to that for option 1. The point can also be shut down completely, in which case the emissions estimates are changed to zero and no projected emissions are calculated.

All three types of options allow for negative percentages to be used in the calculations. A minus sign is punched immediately preceding the affected field on the control card.

Only one type of control card can be entered in a single run. One type-1 (fixed change - all plants) control card can be entered. A maximum of 50 type-2 (SCC specific) control cards, each with a different SCC number, can be entered. A maximum of 50 type-3 (plant/point) control cards, each with a different plant/point combination, can be entered. The first card read determines the type used; any cards of different types, or any cards in excess of the maximum number allowed, will be ignored. Any duplicate SCC cards or plant/point cards will be rejected.

A summary report is printed showing emissions by point for the current five criteria pollutants. Both controlled and potential amounts are listed for the present and projected emissions. The summary report has breaks on plant, county, state, and AQCR. At each of these breaks totals are printed, unless only one entry has occurred since the last break. If only one state and AQCR occur in the master file, the totals printed at the end of the report will be for the last county and then the entire file, since the emissions totals will be the same for the state and AQCR. Total emissions for the entire file are also printed.

6.4.2.2 File Formats

Input to PRPEPRJ (EP0250) consists of an EIS/PS master file (or a projection file) and one or more control cards. The input master file must be in proper master file sequence for the summary report to reflect the precise present and projected emissions totals. See Figure 4.3.9-a for a description of the EIS/PS master file format and Section 6.4.2.3 for a discussion of the control cards and options.

Output from the program consists of an emissions projection file in master file format, a diagnostic report, and a projected emissions summary report. See Figure 4.3.9-a for the description of the EIS/PS master file format since this is also the format of the emissions projection file.

The diagnostic report contains a listing of the option that was in effect and of the control cards that were submitted. It also contains a list of any errors that were detected during program execution, input and output record counts by segment type, and a count of pollutant ID's relative to emission estimation methods. See Figure 6.4.2-a for a sample diagnostic report.

The summary report shows present and projected emissions by point for the current five criteria pollutants. See Figure 6.4.2-b for a sample summary report.

6.4.2.3 Options and Control Cards

There are three types of control cards currently available for use with the emissions projection program. A type-1 control card will cause projected emissions to be calculated for the five criteria pollutants associated with each point in every plant in the master file. These projected emissions are a fixed percentage increase or decrease of the emissions presently in the input master file. The user must code 'ALL' in columns 1 through 3 of the control card. If the projection is to be a fixed percentage decrease, a minus sign must be coded in column 5; otherwise, the projection will be a fixed percentage increase. The percentage of change is coded in columns 6 through 8 and can be any value from '000' to '899'; however, the value must not be greater than '099' if the sign is negative. Finally, a '1' must be coded in column 80 to indicate the card type. The type-1 control card is shown on page 1 of Figure 6.4.2-c.

Type-2 control cards allow the user to modify the fuel process rate, ash and sulfur content, and control device efficiency for selected SCC's. Modifications can be made to these data fields by coding actual values or by specifying change percentages on the control card. The SCC number must be coded in columns 1 through 8 of the card. To replace the fuel process rate in the corresponding input segment 2 record with a new value, code the value in columns 10 through 16. To change the fuel process rate by a percentage, code the percentage in columns 19 through 21. The format for this field contains an implied decimal point with one digit to the left and two digits to the right. Therefore, the user should include any necessary leading or trailing zeroes, but should not code a decimal point. If the change is a decrease, a minus sign must be coded in column 18.

To replace the ash content in the corresponding input segment 2 record with a new value, code the value in columns 23 through 25 of the control card. To change the ash content by adding a value, code the value in columns 28 through 30. If the change is a decrease, a minus sign must be coded in column 27. The formats for both the actual value field and the change field have implied decimal points with two digits to the left and one digit to the right. Therefore, the user should include any necessary leading or trailing zeroes, but should not code a decimal point.

To replace the sulfur content in the corresponding input segment 2 record with a new value, code the value in columns 32 through 34 of the control card. To change the sulfur content by adding a value, code the value in columns 37 through 39. If the change is a decrease, code a minus sign in column 36. The formats for both the actual value field and the change field have implied decimal points with one digit to the left and two digits to the right. Therefore, the user should include any necessary leading or trailing zeroes, but should not code a decimal point.

To replace the control device efficiency in the corresponding input segment 1 record with a new value, code the value in columns 41 through 43 of the control card. To change the control device efficiency by adding a value, code the value in columns 46 through 48. If the change is a decrease, code a minus sign in column 45. The formats for both the actual value field and the change field contain implied decimal points with all three digits to the right. Therefore the user should include any necessary leading or trailing zeroes, but should not code a decimal point. Since there is a control device efficiency for each pollutant in a segment 1 record, the control device efficiencies for all criteria pollutants in that record will be replaced by the value on the control card. In the case where a change is indicated on the control card, the control device efficiencies will be modified by that value.

Finally, a '2' must be coded in column 80 to indicate the card type. The type-2 control card is shown on page 2 of Figure 6.4.2-c.

Type-3 control cards allow the user to change the emissions by a fixed percentage increase or decrease for selected plant/point combinations. To specify a selected plant/point combination, the user must code the state code in columns 1 and 2, the county code in columns 3 through 6, the AQCR code in columns 7 through 9, the plant code in columns 10 through 13, and the point code in columns 14 and 15. The point identification used on the control card is the NEDS point identification. The fixed percentage change is coded in columns 18 through 20 and has the same value limits as the fixed percentage on a type-1 control card. If the change is a decrease, a minus sign must be coded in column 17. The user can shut down a point completely by coding 'OFF' in columns 18 through 20. When this action is taken, the emissions estimates for that point are changed to zero and no projected emissions are calculated. A '3' must be coded in column 80 to indicate the card type.

See Figure 6.4.2-c for a description of the control card formats.

6.4.2.4 Error Messages

PRPEPRJ 001 ERROR - OPTION CARD INVALID, NOT USED IN PROJECTION

Meaning: The card is a type-2 card with a duplicate SCC number; the card is a type-3 card with a duplicate plant/point combination; or an invalid field exists on the card.

Action: No action is necessary if the card is a duplicate control card. If an invalid field exists on the card, correct the error and resubmit the job. If the invalid field exists on a type-2 or type-3 control card, the user may wish to resubmit the job using the previous output projection file as the input file and including only the corrected control card.

PRPEPRJ 002 ERROR - MORE THAN 50 OPTION CARDS, FIRST 50 USED

Meaning: More than 50 type-2 or type-3 cards were submitted in the run. Since the maximum for either type is 50, all excess cards were ignored.

Action: The user can submit the job again using the projected file as input and including the control cards that were ignored in the previous run.

PRPEPRJ 003 ABORT - NO OPTION CARD(S)

Meaning: No control cards were submitted with the run. Since the program requires one type-1 card or at least one type-2 or type-3 card, program execution was terminated.

Action: Resubmit the job including the appropriate control card(s).

PRPEPRJ 004 ABORT - INVALID TYPE FOR OPTION CARD

Meaning: The first control card is not a type-1, type-2, or type-3 control card. Program execution was terminated.

Action: Correct the error and resubmit the job.

PRPEPRJ 005 ABORT - INVALID FIXED INCREASE

Meaning: The fixed percentage specified on the type-1 control card is not numeric, or the fixed percentage is specified as a decrease and the percentage value is greater than '100'.

Action: Correct the error and resubmit the job.

PRPEPRJ 006 ERROR - PROJECTION TOO LARGE, VALUE OF ZERO USED

Meaning: A projected emission value is too large to be contained in the emission field of the output projection file.

Action: Correct the problem by using the projected file as input to a second run and submitting a type-3 control record for the plant/point combination in error. A second alternative is to modify the original control card(s) and resubmit the job.

PRPEPRJ 007 CONDITIONAL - NOT ALL EMISSIONS CAN BE CALCULATED FOR THIS POINT, PRESENT EMISSION USED

Meaning: Data necessary for calculating all the projected emissions was not available, or a size error was detected.

Action: Insure that all data necessary for calculating the emissions for that point is present. Also, check for error message 006, which would indicate a size error problem. Correct the problem and resubmit the job.

PRPEPRJ 008 ERROR - INVALID CHARACTER IN PLANT/POINT FIELDS, ZERO SUBSTITUTED

Meaning: An invalid character was detected during conversion of the plant and point fields on a type-3 control card. Zero was substituted for the invalid character in the converted fields.

Action: Insure that the proper plant and point codes are coded on the control card and resubmit the job.

PRPEPRJ 009 CONDITIONAL - PROJECTED EMISSION FOR THIS POINT WAS ZERO, PRESENT EMISSION USED

Meaning: A projected emission for the point was calculated to be zero. The emission was not changed.

Action: Modify the control card associated with this point and resubmit the job if necessary.

PRPEPRJ 010 ERROR - OPTION TYPE DOES NOT AGREE WITH TYPE USED FOR PROJECTION, CARD REJECTED

Meaning: A card other than a type-2 control card was detected while processing in the type-2 control card mode, or a card other than a type-3 control card was detected while processing in the type-3 control card mode.

Action: Insure that only one type of control card is used and resubmit the job.

PRPEPRJ 011 ABORT - NO VALID OPTION CARDS

Meaning: All type-2 or type-3 control cards submitted in the run were invalid.

Action: Correct the errors on each control card and resubmit the job.

PRPEPRJ 012 CONDITIONAL - PROJECTED POTENTIAL TOO LARGE, ZERO SUBSTITUTED IN OUTPUT FILE

Meaning: A projected potential emission is too large to be contained in the potential emissions field of the output projection file.

Action: Correct the problem by using the projected file as input to a second run and submitting a type-3 control record for the plant/point combination in error. A second alternative is to modify the original control card(s) and resubmit the job.

6.4.2.5 Cataloged JCL - EPRPM50

6.4.2.5.1 JCL listing - PRPEPRJ (EP0250) can be run by executing the cataloged procedure EPRPM50. See Figure 6.4.2-d for a listing of this procedure.

6.4.2.5.2 Cross-reference of DD names and files

Program Name: PRPEPRJ (EP0250)

DD Name	File Description	Input/Output
EPSMSTR	EIS/PS master file	Input
EPSOPTN	Control card file	Input
EPSPROJ	Emissions projection file	Output
EPSDIAG	Diagnostic report	Output
EPSPRNT	Summary report	Output

6.4.2.5.3 User-supplied JCL - To execute the cataloged procedure EPRPM50, the user must supply the data set names of the input master file and the output projection file. Control cards must also be supplied. See Figure 6.4.2-e for a description of the procedure's substitutable parameters.

6.4.2.5.4 Sample run stream - The following run stream creates an emissions projection file using a fixed percentage increase for all plants. The data set names of the input master file and the projection file are their respective default values.

```
// EXEC EPRPM50
//PROJCT.OPTION DD *
ALL 010                                                  1
/*
```

The following run stream calculates emissions projections for specific SCC's. It uses the emissions projection file from the first run stream as input. The data set name of this file is 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPPRJFIL'. The data set name of the output projection file is 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.PROJFIL2'. The selected SCC's and their changes are as follows:

40300104 - a fuel process value of 8,800,150; an ash value of 01.0; a sulfur value of 0.20; and a CDEF value of .950

40300202 - a fuel process change of -010%; an ash change of 02.0; a sulfur change of -0.10; and a CDEF change of -03.0

40300203 - a fuel process change of 015%

10200602 - a fuel process value of 0,000,400

30600102 - a fuel process change of 050%

40300201 - a fuel process value of 9,800,000; an ash change of 01.0; a sulfur change of 0.04; and a CDEF change of -05.0

```
// EXEC EPRPM50,
//      MSTRFIL=EPPRJFIL,
//      PROJFIL=PROJFIL2
//PROJCT.OPTION DD *
40300104 8800150      010       020       950                        2
40300202        -010      +020       -010     -030                   2
4030203          015                                                 2
10200602 0000400                                                     2
30600102        +050                                                 2
40300201 9800000           010        004     -050                   2
/*
```

The user should note that a plus sign and a blank achieve the same purpose.

The following run stream calculates emissions projections for selected plant/point combinations. It uses the output projection file from the second run stream as input. The data set name for the projection file output from this run stream is 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.PROJFIL3'. The selected plant/point combinations are as follows:

Plant 3/Point 2 - increase of 015%
Plant 3/Point 25 - increase of 100%
Plant 4/Point 7 - decrease of 005%
Plant 4/Point 8 - increase of 050%
Plant 5/Point 1 - shut down completely
Plant 5/Point 5 - decrease of 010%

```
// EXEC EPRPM50,
//      MSTRFIL=PROJFIL2,
//      PROJFIL=PROJFIL3
//PROJCT.OPTION DD *
054200024000302 +015                                          3
054200024000325  100                                          3
054200024000407 -005                                          3
054200024000408  050                                          3
054200024000501  OFF                                          3
054200024000505 -010                                          3
```

6.4.2.6 Warnings and Special Instructions

The user is warned that projected emissions are calculated regardless of the type of estimation method. This may cause a considerable difference between present and projected emissions if the type of estimation method is not '3'.

6.4.2.7 Cost Considerations

The estimates listed below are based on the execution on an IBM 370/168 of the first run stream discussed in Section 6.4.2.5.4.

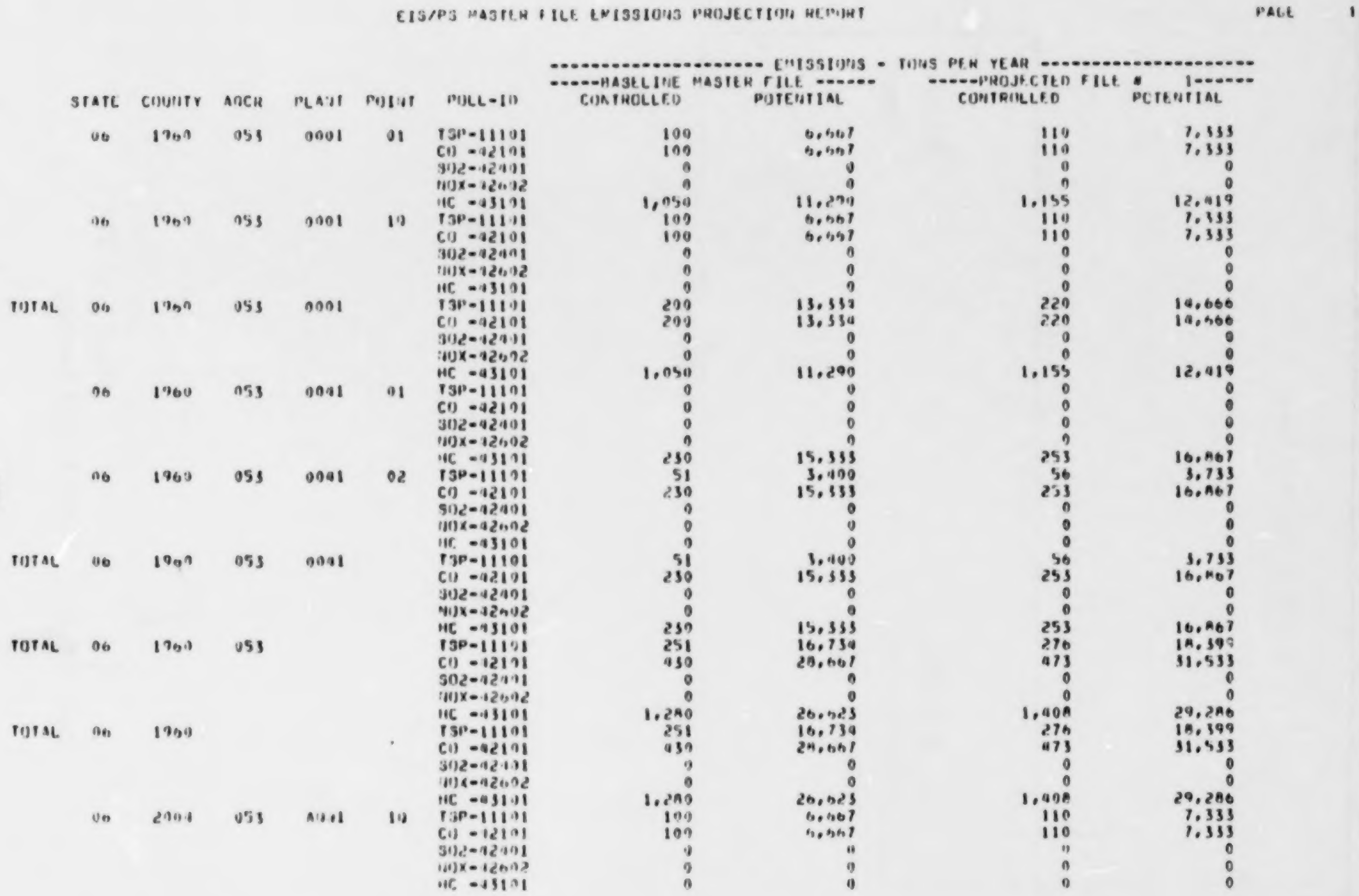
Input master file records:	162 records
Output projection file records:	186 records
Number of errors detected:	0 errors
CPU time:	.85 seconds
I/O time:	1.63 seconds
Total time:	2.48 seconds
Estimated cost:	$.35

6.4.2.8 Related Programs and Procedures

The user may find it helpful to use a retrieval answer file as input to the emissions projection program if projected emissions for the entire master file are not needed. See Section 5.2, Retrieval for information on executing a retrieval.

```
                    EIS/PS MASTER FILE EMISSIONS PROJECTION PROGRAM  -  DIAGNOSTIC REPORT                        PAGE     1

PROGRAM NAME: PRPEPRJ (EP0250)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD          FIXED OPTION USED - ALL PLANTS

   % INC                                                            OPTION TYPE
ALL +010                                                                1

OPTION COUNT       1      VALID OPTIONS      1



INPUT RECORD COUNT:        162
          SEGMENT 0:        32
          SEGMENT 1:        53
          SEGMENT 2:        69
          SEGMENT 3:         8
OUTPUT RECORD COUNT:       186
          SEGMENT 0:        33
          SEGMENT 1:        54
          SEGMENT 2:        69
          SEGMENT 3:        30
NUMBER OF CONDITIONAL MESSAGES:         0
NUMBER OF ERROR MESSAGES:               0
NUMBER OF ABORT MESSAGES:               0

COUNT OF POLLUTANT IDS BY EST METHOD    METHOD    NUMBER OF POLLUTANT IDS

                                           0        36
                                           1         9
                                           2         6
                                           3       143
                                           4         6
                                           5         5
                                           6         0
                                           7        15
                                       OTHER        32
```

Figure 6.4.2-a. Diagnostic Report



```
                                 EIS/PS MASTER FILE EMISSIONS PROJECTION REPORT                                  PAGE    1

                                                    -------------------- EMISSIONS - TONS PER YEAR --------------------
                                                    -----BASELINE MASTER FILE ------     -----PROJECTED FILE #    1------
       STATE  COUNTY  AQCR  PLANT  POINT  POLL-ID     CONTROLLED     POTENTIAL               CONTROLLED     POTENTIAL
        06    1960    053   0001    01   TSP-11101          100         6,667                      110         7,333
                                         CO -42101          100         6,667                      110         7,333
                                         SO2-42401            0             0                        0             0
                                         NOX-42602            0             0                        0             0
                                         HC -43101        1,050        11,290                    1,155        12,419
        06    1960    053   0001    10   TSP-11101          100         6,667                      110         7,333
                                         CO -42101          100         6,667                      110         7,333
                                         SO2-42401            0             0                        0             0
                                         NOX-42602            0             0                        0             0
                                         HC -43101            0             0                        0             0
 TOTAL  06    1960    053   0001         TSP-11101          200        13,333                      220        14,666
                                         CO -42101          200        13,334                      220        14,666
                                         SO2-42401            0             0                        0             0
                                         NOX-42602            0             0                        0             0
                                         HC -43101        1,050        11,290                    1,155        12,419
        06    1960    053   0041    01   TSP-11101            0             0                        0             0
                                         CO -42101            0             0                        0             0
                                         SO2-42401            0             0                        0             0
                                         NOX-42602            0             0                        0             0
                                         HC -43101          230        15,333                      253        16,867
        06    1960    053   0041    02   TSP-11101           51         3,400                       56         3,733
                                         CO -42101          230        15,333                      253        16,867
                                         SO2-42401            0             0                        0             0
                                         NOX-42602            0             0                        0             0
                                         HC -43101            0             0                        0             0
 TOTAL  06    1960    053   0041         TSP-11101           51         3,400                       56         3,733
                                         CO -42101          230        15,333                      253        16,867
                                         SO2-42401            0             0                        0             0
                                         NOX-42602            0             0                        0             0
                                         HC -43101          230        15,333                      253        16,867
 TOTAL  06    1960    053                TSP-11101          251        16,734                      276        18,399
                                         CO -42101          430        28,667                      473        31,533
                                         SO2-42401            0             0                        0             0
                                         NOX-42602            0             0                        0             0
                                         HC -43101        1,280        26,623                    1,408        29,286
 TOTAL  06    1960                       TSP-11101          251        16,734                      276        18,399
                                         CO -42101          430        28,667                      473        31,533
                                         SO2-42401            0             0                        0             0
                                         NOX-42602            0             0                        0             0
                                         HC -43101        1,280        26,623                    1,408        29,286
        06    2004    053   A001    10   TSP-11101          100         6,667                      110         7,333
                                         CO -42101          100         6,667                      110         7,333
                                         SO2-42401            0             0                        0             0
                                         NOX-42602            0             0                        0             0
                                         HC -43101            0             0                        0             0
```

Figure 6.4.2-b. Summary Report

Option 1 Control Card

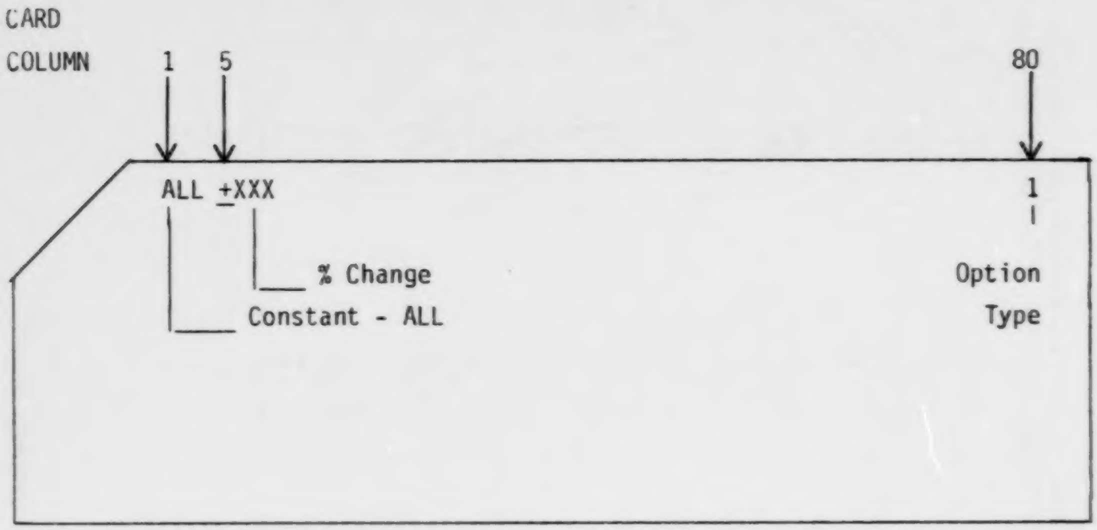


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Figure 6.4.2-c. Control Card Formats

Option 2 Control Card

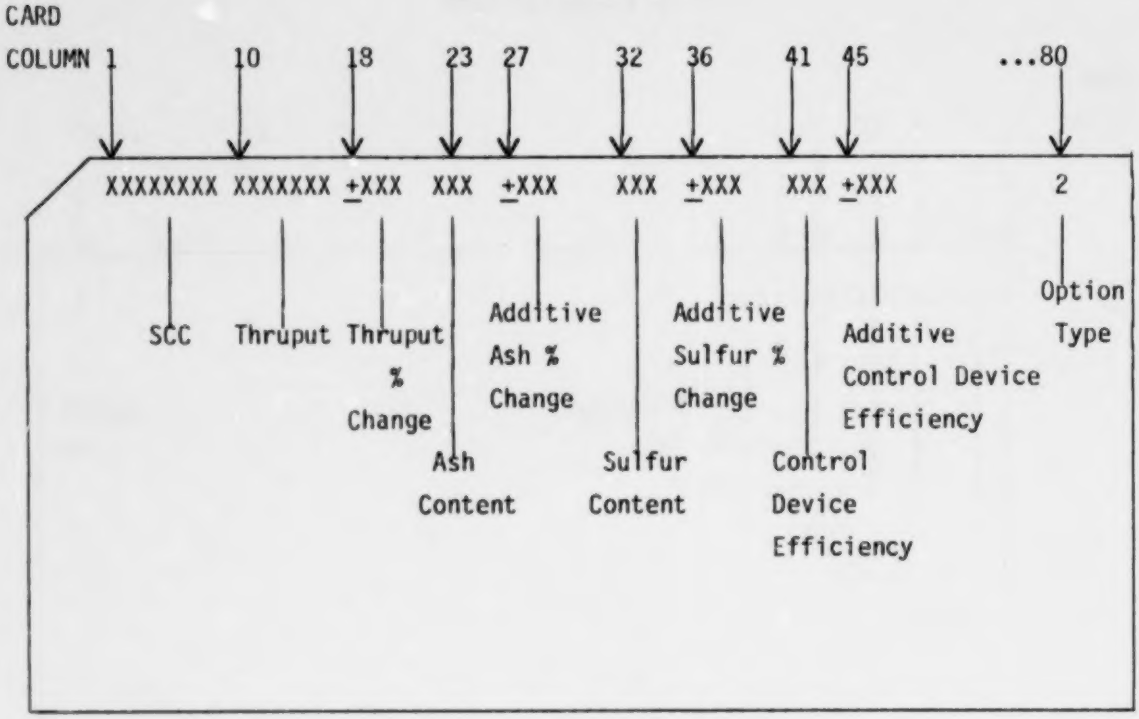

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Figure 6.4.2-c - continued. Control Card Formats

Option 3 Control Card

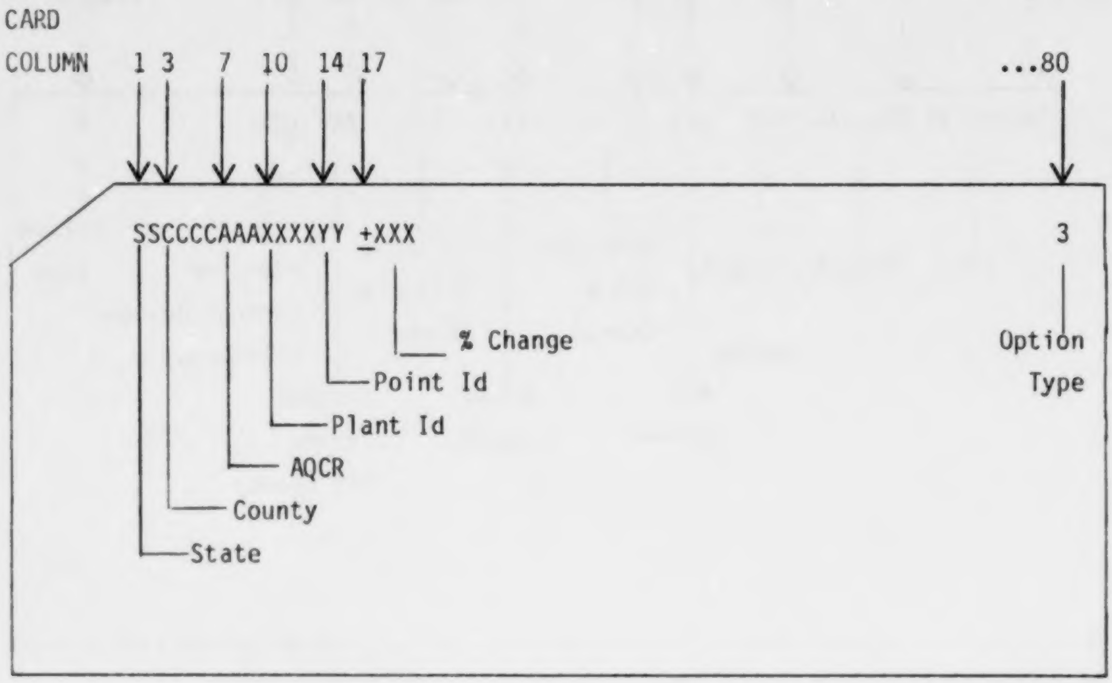

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Figure 6.4.2-c - continued. Control Card Formats

```
//* EPALMR/A087 HEDGEPETH, LLOYD M. (919) 541-5491                   00000100
//*                                                                   00000200
//*    PROCEDURE NAME: EPRPM50                                        00000300
//*    REVISION LEVEL: 1-00                                           00000400
//*    LAST UPDATE #: P-1                                             00000500
//*    DATE INCORPORATED: FEBRUARY 1, 1980                            00000600
//*                                                                   00000700
//*    THIS PROCEDURE ALLOWS THE USER TO GENERATE AN EIS/PS           00000800
//*    EMISSIONS PROJECTION MASTER FILE                               00000900
//*                                                                   00001000
//*                                                                   00001100
//EPRPM50 PROC PROJECT='CH.EPALMR.A087.CONS.HQ.PNT',                  00001200
//             PROGRAM=PRPEPRJ,                                       00001300
//             MSTRFIL=EPMASTER,                                      00001400
//             PROJFIL=EPPRJFIL,                                      00001500
//             REGION1=150K,                                          00001600
//             TIME1='1,0',                                           00001700
//             UNIT=3330,                                             00001800
//             SERIAL=CONSPK,                                         00001900
//             DISP='NEW,CATLG,DELETE',                               00002000
//             SPCUNIT=TRK,                                           00002100
//             PRIMARY=20,                                            00002200
//             SECNDRY=10,                                            00002300
//             OUT=A                                                  00002400
//*                                                                   00002500
//*                                                                   00002600
//PROJECT  EXEC PGM=&PROGRAM,                                         00002700
//             REGION=&REGION1,                                       00002800
//             TIME=(&TIME1)                                          00002900
//*                                                                   00003000
//*PROJECT EMISSIONS IN THE EIS/PS MASTER FILE                        00003100
//*                                                                   00003200
//STEPLIB  DD  DSNAME=&PROJECT..LOAD,                                 00003300
//             VOLUME=(PRIVATE,RETAIN),                               00003400
//             DISP=(SHR,PASS)                                        00003500
//*                                                                   00003600
//* INPUT DATA SET - EIS/PS MASTER FILE                               00003700
//*                                                                   00003800
//EPSMSTR   DD DSNAME=&PROJECT..DATA.&MSTRFIL,                        00003900
//             VOLUME=(PRIVATE,RETAIN),                               00004000
//             DISP=(SHR,PASS)                                        00004100
//*                                                                   00004200
//* INPUT DATA SET - OPTION CARD                                      00004300
//*                                                                   00004400
//EPSOPTN  DD DDNAME=OPTION,                                          00004500
//             DCB=BLKSIZE=80                                         00004600
//*                                                                   00004700
//* OUTPUT DATA SET - EMISSIONS PROJECTION MASTER FILE                00004800
//*                                                                   00004900
//EPSPROJ  DD DSNAME=&PROJECT..DATA.&PROJFIL,                         00005000
//             UNIT=&UNIT,                                            00005100
//             VOLUME=(PRIVATE,RETAIN,SER=&SERIAL),                   00005200
//             DISP=(&DISP),                                          00005300
//             SPACE=(&SPCUNIT,(&PRIMARY,&SECNDRY),RLSE)              00005400
//*                                                                   00005500
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                               00005600
```

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Figure 6.4.2-d. Cataloged Procedure EPRPM50

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```
//*                                                                      00005700
//EPSDIAG  DD SYSOUT=&OUT                                                00005800
//*                                                                      00005900
//*OUTPUT DATA SET - PROJECTION REPORT                                   00006000
//*                                                                      00006100
//EPSPRJT  DD SYSOUT=&OUT                                                00006200
//*                                                                      00006300
//*OUTPUT DATA SETS - SYSTEM OPERATIONS                                  00006400
//*                                                                      00006500
//SYSPRINT  DD SYSOUT=&OUT                                               00006600
//*                                                                      00006700
//SYSOUT    DD SYSOUT=&OUT                                               00006800
//*                                                                      00006900
//SYSDBOUT  DD SYSOUT=&OUT                                               00007000
//*                                                                      00007100
//SYSOTERM  DD SYSOUT=&OUT                                               00007200
//*                                                                      00007300
//SYSUDUMP  DD SYSOUT=&OUT                                               00007400
//*                                                                      00007500
//*                                                                      00007600
```

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Figure 6.4.2-d - continued. Cataloged Procedure LPRPM50

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMASTER would be the full data set name of the EIS/PS input master file)
PROGRAM	PRPEPRJ	Master file emissions projection program
MSTRFIL	EPMASTER	Lowest-level index of input master file
PROJFIL	EPPRJFIL	Lowest-level index of output projection file
REGION1	150K	Region size allocated for execution of PRPEPRJ
TIME1	'1,0'	Maximum time limit allocated for execution of PRPEPRJ
UNIT	3330	Device type to which output projection file is to be written
SERIAL	CDHSPK	Volume serial number of volume to which output projection file is to be written
DISP	'NEW,CATLG,DELETE'	Disposition of output projection file
SPCUNIT	TRK	Units in which space for output projection file is to be allocated
PRIMARY	20	Primary space allocation for output projection file
SECNDRY	10	Secondary space allocation for output projection file
OUT	A	SYSOUT class for all print files

Figure 6.4.2-e. Substitutable Parameters for EPRPM50

6.5 QUICK LOOK REPORT

6.5.1 INTRODUCTION

The quick look programs enable the user to extract data and to format and print reports from the EIS/PS master file. The programs are designed for flexibility, easy submission, and quick turnaround of retrieval requests. Three types of output are available:

> Quick look report. In the quick look report, master file data elements specified by the user are printed in user-specified format. The user may specify the accumulation of totals for certain fields, the order of the data in the report, and the generation of a page break upon a change in certain fields. Up to three quick look report formats may be specified in one execution of the quick look programs.
>
> Turnaround document. In the turnaround document, data from selected records are printed in EIS/PS transaction format with spaces separating individual data fields. Space is also provided below the data for coding changes to the data. Coded changes may then be keyed from the turnaround document. Each master file record selected for inclusion in the turnaround document will be printed on a separate page; thus it is advisable to select a small number of records when a turnaround document is being produced. Also, all data in each record selected is included in the turnaround documents, even if the selection criteria includes repeating (pollutant-dependent) fields.
>
> If the turnaround document is distributed to sources for verification and updating, include a detailed set of coding instructions and a sample set of EIS/PS load sheets so that the headings and field content of the

turnaround document are clear. Also, provide a clear set of keypunch instructions for the person performing that task.

Answer file. The answer file has the same format as the EIS/PS master file and can be used as input to any program that accepts the master file for processing. The quick look programs are not designed to replace the EIS/PS retrieval programs (the retrieval language processor and the retrieval program); they do not have the extensive capabilities of the retrieval programs. However, for simple retrievals, the quick look programs can be used instead of the retrieval programs.

The contents of the answer file produced by the quick look programs will depend upon which type of records are selected. If a plant segment (type 0 record) qualifies for selection, it will be included in the answer file; but no subordinate records will be included (unless they independently qualify for selection). If a point source segment (type 1 record) qualifies for selection, it will be accompanied by the plant segment to which it is subordinate; but no subordinate records will be included (unless they independently qualify for selection). If an SCC segment (type 2 record) or a comment segment (type 3 record) qualifies for selection, it will be accompanied by the plant segment and the point source segment to which it is subordinate. If the selection criteria for a point source segment or an SCC segment includes repeating (pollutant-dependent) fields, the point source segment or SCC segment in the answer file will contain only the requested repeating section of the master file records; that is, the repeating section that satisfies the selection criteria. However, if the selection criteria for a point source segment or SCC segment includes no repeating (pollutant-dependent) fields, the entire point segment or SCC segment will be included in the answer file.

This retreival technique differs from that employed by the EIS/PS retrieval programs (refer to Section 5.2 of the EIS/PS Users Guide).

There are four quick look programs. Each of these is summarized below. A flow diagram is shown in Figure 6.5.1-a.

Quick look edit program, PRTQLED (EP0260). The quick look edit program reads retrieval specification cards prepared by the user. A diagnostic report is generated that includes the retrieval specifications and appropriate messages for any errors encountered. Two temporary files are created that are subsequently read by the other quick look programs: an extract control file and a report control file.

Quick look extract program, PRTQLEX (EP0270). The quick look extract program processes the extract control file produced by the edit program. Records are selected from the master file for processing based upon the information in the extract control file. If an answer file is requested by the user, the selected records are written to the output answer file. If a turnaround document is requested by the user, the selected records are included in a temporary file (the turnaround document file) that is passed to the quick look turnaround document program. If a quick look report is requested by the user, the data to be printed in the report are extracted from the selected records and included in a temporary file (the quick look report file) that is passed to the quick look report program. The quick look extract program also produces a diagnostic report containing input/output statistics.

Quick look report program, PRPQUIK (EP0280). The quick look report program is executed only if a quick look report is desired. It processes the report control file produced by the edit program and the quick look report file produced by the extract program. It then prints the quick look report(s).

Quick look turnaround document program, PRPTURN (EP0290). The quick look turnaround document program is executed only if a turnaround document is desired. It processes the report control file produced by the edit program and the turnaround document file produced by the extract program. It then prints the turnaround document.

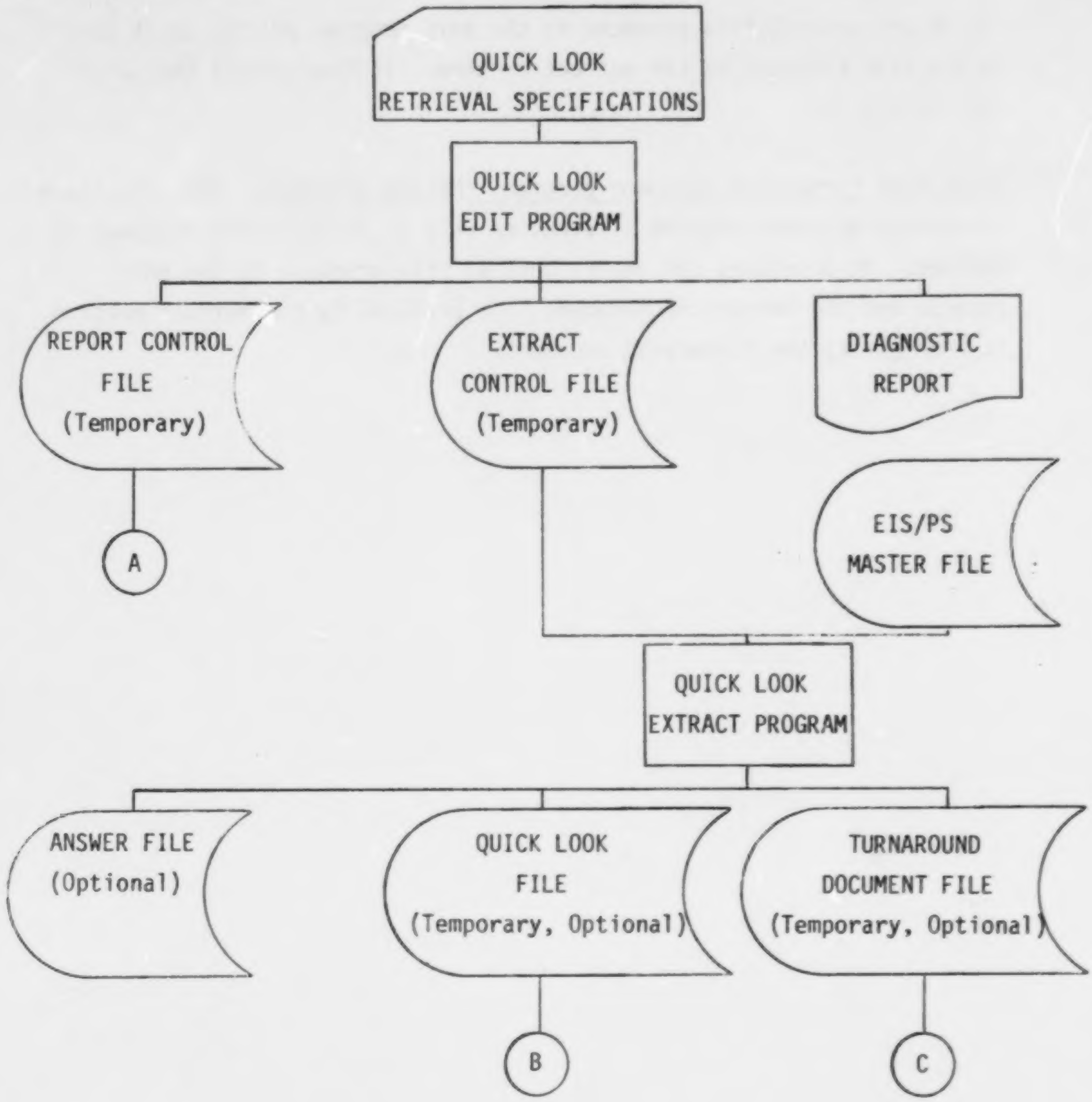
QUICK LOOK RETRIEVAL SPECIFICATIONS
QUICK LOOK EDIT PROGRAM
REPORT CONTROL FILE (Temporary)
EXTRACT CONTROL FILE (Temporary)
DIAGNOSTIC REPORT
EIS/PS MASTER FILE
A
QUICK LOOK EXTRACT PROGRAM
ANSWER FILE (Optional)
QUICK LOOK FILE (Temporary, Optional)
TURNAROUND DOCUMENT FILE (Temporary, Optional)
B
C

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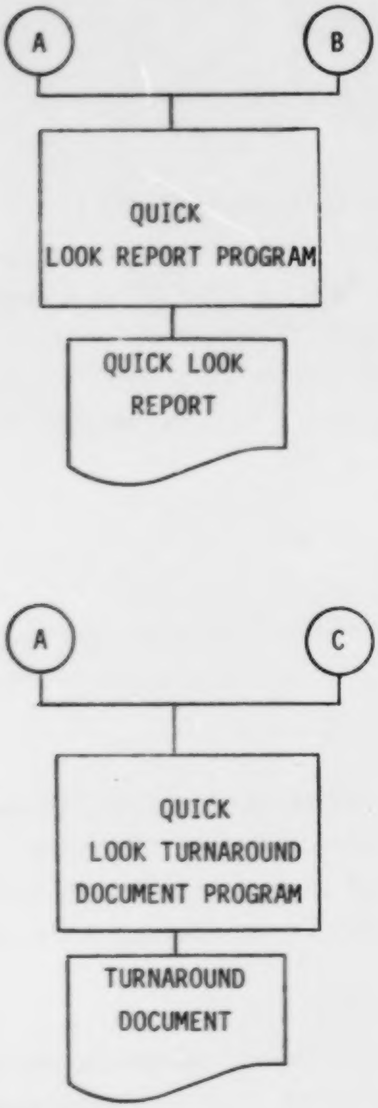
Figure 6.5.1-a. Flow Diagram of Quick Look Programs


A
B
QUICK LOOK REPORT PROGRAM
QUICK LOOK REPORT
A
C
QUICK LOOK TURNAROUND DOCUMENT PROGRAM
TURNAROUND DOCUMENT

Optional step,
executed only if quick
look report is desired

Optional step,
executed only if
turnaround document
is desired

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Figure 6.5.1-a - continued. Flow Diagram of Quick Look Programs

6.5.2 QUICK LOOK EDIT PROGRAM - PRTQLED (EP0260)

6.5.2.1 Introduction

PRTQLED (EP0260) processes user-supplied quick look retrieval specification cards. Information from these cards determines the master file record selection criteria which is passed to PRTQLEX (EP0270) in a temporary file. The information also determines the type and format of the report requested by the user. The report format information is passed in a temporary file to PRPQUIK (EP0280) or PRPTURN (EP0290) depending upon the type of report requested.

6.5.2.2 File Formats

Input to PRTQLED (EP0260) consists of user-supplied quick look retrieval specification cards. See Section 6.5.2.3 for further discussion of these cards.

Output form the program consists of an extract control file, a report control file, and a diagnostic report. The extract control file is a temporary file that is passed to the quick look extract program, PRTQLEX (EP0270). It contains the information necessary for selecting records from the master file.

The report control file is a temporary file that is passed to the quick look report program PRPQUIK (EP0280) or to the quick look turnaround document program, PRPTURN (EP0290), depending on the cataloged procedure that is executed. This file contains information for the format of the quick look report if a quick look report is requested, it also contains information for the format of the turnaround document if a turnaround document is requested.

The diagnostic report contains information about selection criteria, report format, sort sequence, and data elements included in the quick look report. Also, error messages will be listed for any errors that are detected. Refer to the quick look examples in Section 6.5.2.3 for figures that show sample diagnostic reports.

6.5.2.3 Options and Control Cards

Quick look retrieval specification cards are prepared by the user to specify the data to be selected from the master file and the type of output to be produced. The format of the cards is shown in Figure 6.5.2-a. A description of each field on the cards is provided in Figure 6.5.2-b. A quick look coding form is provided in Figure 6.5.2-c. The coding form can be reproduced locally and used in preparing quick look retrieval specification cards.

Each set of retrieval specification cards must begin with a $$SELECT card and end with a $$END card. The $$SELECT card signals the beginning of a quick look retrieval and can contain a report heading for the quick look report or the turnaround document. The $$END card signals the end of a quick look retrieval.

Between the $$SELECT card and the $$END card, the following cards are entered in order: from one to twenty 10 cards, a 20 card, a 30 card (optional), a 40 card (optional, unless QL is specified on the 20 card), a 41 card (optional if a 40 card is entered, not allowed otherwise), and a 42 card (optional if a 40 and a 41 card are entered, not allowed otherwise). The 10 card(s) specifies which records are to be selected from the EIS/PS master file for processing. The 20 card specifies the desired report type and/or output answer file. The 30 card specifies the order of the quick look report or turnaround document and can be used to specify page break/subtotalling for specific data elements. The 40, 41, and 42 cards specify the data fields to be included in the quick look report, the suppression of detail lines, and the totalling for specific data elements. A quick look report is generated for each card. See Figure 6.5.2-b for a complete description of the data fields for these cards.

The user must be especially careful in the preparation of 10 cards; not only because the 10 cards determine which records from the master file will be selected for processing, but also because they may affect the efficiency of the quick look retrieval. Figure 6.4.2-d lists all the valid abbreviations for data elements in the master file. Each 10 card consists of a relational expression containing one of these data element abbreviations. For example,

```
10    CNTY E 0325
```

specifies that all segments (plant, point, SCC, and comment with county equal to 0325 are to be selected for processing. The abbreviation CNTY is listed under the heading 'Data Elements Common to All Segments' in Figure 6.5.2-d. However, the abbreviation OCNT is listed for county under 'Plant Segment Data Elements'. For example,

```
10    OCNT E 0325
```

specifies that all plant segment records with county equal to 0325 are to be selected for processing; all other records are bypassed. If only plant information is desired in the output(s) from the quick look retrieval, the second 10 card would cause a more efficient retrieval than the first. (Example 1 in this section demonstrates a retrievel where only plant information is to appear in the output.)

Type 10 cards can be combined using the boolean operators AND and OR. For example,

```
10   CNTY E 0325          AND
10   PLNT G 0009          AND
10   PLNT L 0021
```

specifies that all records with county equal to 0325 and plant ID greater than 0009 and less than 0021 (i.e., 0010 to 0020 inclusive) are to be selected for processing.

If AND's and OR's are used in the same quick look retrieval, the AND's are evaluated before the OR's. For example,

```
10   CNTY E 0325          AND
10   PLNT E 0010          OR
10   PLNT E 0015
```

specifies that all records with county equal to 0325 and plant ID equal to 0010 plus all records with plant ID equal to 0015 (regardless of county number) are to be selected for processing.

Parentheses can be used to override the normal hierarchy of AND's and OR's. For example,

```
10   CNTY E 0325          AND
10 ( PLNT E 0010          OR
10   PLNT E 0015        )
```

specifies that all records with county equal to 0325 and plant ID equal to either 0010 or 0015 are to be selected for processing. When parentheses are used in quick look retrievals, they cannot be nested. Also each left parenthesis must have a paired right parenthesis.

The user must be careful not to code meaningless 10 cards (cards which select no records for processing). The following 10 cards;

```
10   UTMZ P                AND
10   UTMC P
```

would select no records from the master file since the selection process incorporated into the quick look programs examines each record of the master file independently. (Only one record at a time is evaluated against the selection criteria. After it is evaluated, the next record is read and evaluated, etc.) Since UTM zone (UMTZ) is a field in the plant segment record and UTM coordinates (UTMC) is a field in the point source segment, no record in the master file can contain both a UTM zone and UTM coordinates; therefore no record is selected for processing.

When repeating (pollutant-dependent) data elements are included in the selection criteria, the following restrictions apply: (1) the data abbreviation for pollutant ID (POLL or MPID) must be specified on a 10 card prior to any 10 card having the data abbreviation of a repeating field, (2) the relational operator must be E on any 10 card with the data abbreviation POLL or MPID, (3) the data abbreviations POLL and MPID can be used only once on the set of 10 cards of any quick look retrieval. Thus, repeating (pollutant-dependent) data can be selected from point source segments or SCC segments for only one pollutant in a given quick look retrieval.

If repeating data elements are to appear in a quick look report, the 10 cards must specify the desired pollutant ID; only repeating data for the specified pollutant will appear in the report. However, if a turnaround document is being produced, all data from each selected record appear in the turnaround document regardless of whether or not repeating fields are included in the selection criteria. If an answer file is being produced and repeating data elements are included in the selection criteria, the point source segments or SCC segments will contain one repeating section: the one satisfying the selection criteria. But if repeating data elements are not included in the selection criteria, the point source or SCC segments in the answer file will contain the same data as those in the corresponding segment of the input master file.

The following examples demonstrate the use of all quick look retrieval specification cards. Sample output is shown. All data used in these examples are ficticious test data and do not reflect actual emissions data.

The examples include the JCL to run the quick look programs. The JCL in each example invokes one of the three quick look cataloged procedures: EPRTM40 executes the edit program and the extract program and can be used when an answer file is being produced; EPRPM60 executes the edit program, the extract program, and the report program and can be used when a quick look report is being produced or when a quick look report and an answer file are being produced; EPRPM70 executes the edit program, the extract program, and the turnaround document program and can be used when a turnaround document is being produced or when a turnaround document and an answer file are being produced.

Example 1. A quick look report is generated listing the plant, name and address, mailing address, contact, and telephone number of all plants in state 06. A title is to be placed on the report: 'TEST 1 - PLANTS IN STATE 06 AS OF 4/1/80'. The master file from which the data is to be retrieved is EPMSTR2.

The JCL to run this quick look retrieval and report is as follows:

```
// EXEC EPRPM60,
//       MSTRFIL=EPMSTR2
//EDIT.INPUT DD *
$$SELECT TEST 1 - PLANTS IN STATE 06 AS OF 4/1/80
10   ØSTT E 06
20 QL
40   PLNT  NAAD  MAIL  CONT  TELE
$$END
/*
//
```

Notice that only plant information is being requested; therefore, ØSTT is used on the 10 card instead of STTE in order to increase the efficiency of the retrieval (i.e., only plant segment records are tested against the selection criteria). The 20 card specifies a that quick look report is to be generated. The 40 card lists abbreviations for data elements to be printed. The abbreviations are entered left to right in the order that they are to be printed in the report.

Figure 6.5.2-e shows the output from this quick look retrieval. It shows the diagnostic report from the edit program, the diagnostic report from the extract program, the update messages generated by the report program, and the quick look report. The total number of quick look lines is also printed at the end of the quick look report.

In Figure 6.5.2-e and following figures, a dashed line across the figure denotes a page break in the computer printout.

Example 2. An answer file is to be produced that contains repeating (pollutant-dependent) data for sulfur dioxide only (pollutant code of 42401). Also, the answer file is to contain no comment segments. The data are retrieved from master file EPMSTR2. The answer file is named QLANSR1.

The JCL to run this quick look retrieval and produce the answer file is as follows:

```
//  EXEC EPRTM40,
//       MSTRFIL=EPMSTR2,
//       ANSRFIL=QLANSR1
//EDIT.INPUT DD *
$$SELECT TEST 2 - PRODUCE AN ANSWER FILE WITH SO2 DATA   4/1/80
10   POLL E 42401         OR
10   MPID E 42401
20 AF
$$END
/*
//
```

The title 'TEST 2 - PRODUCE AN ANSWER FILE WITH SO2 DATA 4/1/80' on the $$SELECT card will appear on the diagnostic report from the edit program. The 10 cards specify that a record will be selected for processing if it is a point source record with a pollutant ID equal to 42401 or if it is an SCC record with a pollutant ID equal to 42401. Since POLL is a repeating point source data element abbreviation, each point source segment selected for processing will be altered to contain repeating (pollutant-dependent) data for only the appropriate pollutant ID, in this case only for sulfur dioxide. Likewise, since MPID is a repeating SCC data element abbreviation, each SCC segment selected for processing will be altered to contain repeating data for only sulfur dioxide. When an answer file is produced by the quick look programs, each selected segment is accompanied by the segment(s) to which it is subordinate. Thus, the answer file produced will contain plant segments for point segments and SCC segments containing sulfur dioxide data. No comment segments will be in the answer file because comment segments are subordinate to point source segments.

The answer file will be in the same order as the master file. This would be the case even if a 30 card were entered because the 30 card only affects the order of quick look reports and turnaround documents.

Figure 6.5.2-f shows the diagnostic reports produced by the edit and extract programs and sample output from a list (produced by the master file detailed report program, PRPMSTR (EP0210), of the answer file.

Example 3. A turnaround document is to be produced for all records for plant 0041, county 1960, state 06. The master file used is EPMSTR2.

The JCL to run this quick look retrieval and report is as follows:

```
//  EXEC EPRPM70,
//  MSTRFIL=EPMSTR2
$$SELECT TEST 3 - TURNAROUND DOCUMENT  4/1/80
10   STTE E 06              AND
10   CNTY E 1960            AND
10   PLNT E 0041
20 TA
$$END
/*
//
```

Since STTE, CNTY, and PLNT are data abbreviations associated with all segments of the file (refer to Figure 6.5.2-d), all records with state equal to 06, county equal to 1960, and plant equal to 0041 will be selected for processing. The 20 card specifies that a turnaround document is to be produced. In this example no 30 card is supplied to specify a user-defined sort order in the report. Therefore, the sort sequence defaults to the sort order of the master file. Figure 6.5.2-g shows the diagnostic reports produced by the edit and extract programs and sample printout from the turnaround document.

The turnaround document displays the data from the selected records in card transaction format. Each field of data is printed below a listing of an abbreviation for the data field and the card column numbers in which the data would appear in a transaction. The card column numbers are printed vertically; therefore,

```
ST CNTY
00 0000
12 3456

06 1960
.. ....
```

indicates that the state code is 06 and is coded in card columns 01 and 02 while the county code is 1960 and is coded in card columns 03 through 06. Note that the number of periods (...) indicates the allowable field width for each data field. Space is left between the data and the periods below the data so that handwritten changes can be entered. These changes should be written carefully above each period.

The first 18 columns of each card (transaction) in a set is printed only once at the upper left of the page. This information must be punched on all transactions.

Example 4. A quick look report is to be generated listing estimated and allowable emissions for hydrocarbons (pollutant code 43101) for all points of all plants in county 0040. Only those points for which an estimated or allowable emission is recorded in the master file are to be retrieved and printed. In addition to the estimated and allowable emissions, the state code, county code, plant ID, and NEDS point ID are to be printed. The report is to be ordered by estimated emissions and allowable emissions. These two fields are to be totalled. A title is to appear on the report: 'TEST 4 HYDROCARBON EMISSIONS FOR COUNTY 0040 AS OF 4/1/80'. The data are retrieved from master file EPMSTR2.

The JCL to run this quick look retrieval and report is as follows:

```
//  EXEC EPRPM60,
//       MSTRFIL=EPMSTR2
//EDIT.INPUT DD *
$$SELECT TEST 4 - HYDROCARBON EMISSIONS FOR COUNTY 0040 AS OF 4/1/80
```

```
10   1CNT E 0040          AND
10   POLL E 43101         AND
10 ( ESTI P               OR
10   ALLO P             )
20 QL
30 ESTI  ALLO
40   STTE  CNTY  PLNT  NPID  ESTIX ALLOX
$$END
//
/*
```

The 10 cards specify the records to be selected for processing: all point source records with county equal to 0040, pollutant code equal to 43101 and a value present for either estimated emissions or allowable emissions. Only point source records will be tested against the selection criteria since all data element abbreviations on the 10 cards are associated with point source records (refer to Figure 6.5.2-d). POLL, ESTI, and ALLO are repeating data element abbreviations, thus, POLL (pollutant ID) must be specified first and must appear with a relational operator of E. Parentheses are used to group the last two 10 cards together.

The 20 card specifies that a quick look report is to be produced; therefore, the 40 card must be present. (41 and 42 cards may also be present.) The 30 card specifies the order of data in the quick look report: the primary sort order is by estimated emissions, the secondary sort order is by allowable emissions, the tertiary sort order is the order of the master file. (Note: Whenever a 30 card specifies a sort order for a quick look report or turnaround document, the sort order subordinate to that sort order will be the order of the master file). The 40 card lists the data elements to be printed in the quick look report. The data element abbreviations STTE, CNTY, and PLNT may be used instead of 1STT, 1CNT, and 1PLN without affecting the efficiency of the quick look retrieval; only 10 card data element abbreviations can affect the efficiency of quick look retrievals. Notice that an X is coded after the abbreviations ESTI and ALLO on the 40 card. This generates totals for estimated emissions and allowable emissions.

Figure 6.5.2-h shows the diagnostic report from the edit and extract programs and a sample page from the quick look report.

Example 5. This example demonstrates the use of page break/subtotalling in producing a quick look report. A quick look report is generated listing stack data for all points of all plants in county 0040 of state 34. A page break is desired when the plant changes. The report is ordered by plant ID and NEDS point ID. A second quick look report is generated listing the boiler design capacity for each point selected, along with the stack data and totalling the boiler design capacity. The data are retrieved from master file EPMSTR2.

The JCL to run this quick look retrieval and report is as follows:

```
//  EXEC EPRPM60,
//       MSTRFIL=EPMSTR2
//EDIT.INPUT DD *
$$SELECT TEST 5 - STACK DATA FOR COUNTY 0040 IN STATE 34 AS OF   4/1/80
10   1STT E 34             AND
10   1CNT E 0040
20 QL
30 PLNTX NPID
40   PLNT  NPID  HGHT  DIAM  TEMP  FLOW  VELO  PLUM  PWCS
41   PLNT  NPID  HGHT  DIAM  TEMP  FLOW  VELO  PLUM  PWCS  BOILX
$$END
/*
//
```

The 10 cards specify that all point source segments with state equal to 34 and county equal to 0040 are to be selected for processing. The 20 card specifies that a quick look report is to be generated. The 30 card specifies the sort order of the quick look reports: the primary sort field is plant ID, the secondary sort field is NEDS point ID, the tertiary sort field is the master file key (i.e., within plant ID and NEDS point ID, the data will appear in the order it occurs in the master file). The X following PLNT on the 30 card specifies that a page break is to be generated when plant ID changes. The total number of records for the data field designated for page break/subtotalling is printed when the value of that designated field changes. The 40 and 41 cards specifiy the data elements to be listed in the quick look reports. The X following BOIL on the 41 card specifies that boiler design capacity is to be totalled.

Figure 6.5.2-i shows the diagnostic report generated by the edit and extract programs and sample pages from both quick look reports. Note that in the second quick look report where totalling was requested, a subtotal appears when a page break occurs. A grand total also appears at the end of the report.

Example 6. This example shows how detailed lines can be suppressed when totals are being generated. A quick look report is generated which contains totals of estimated emissions for particulates for all plants in county 0040. The detailed lines are suppressed in the report, therefore only total lines are shown. For illustrative purposes, a second report is produced in which the detailed lines are not suppressed.

When suppression of detailed lines is requested on a 40, 41, or 42 card, a 30 card must be entered containing a page break/subtotalling request for at least one data element. Moreover, the data elements for which page break/subtotalling is requested on the 30 card must appear in the 40, 41, or

42 card in the order that they appear on the 30 card. Totalling must be requested for at least one data element on the 40, 41, or 42 card. It is recommended that each data element on the 40, 41, or 42 card be listed on the 30 card with a page break/subtotalling request or be accompanied by a totalling request on the 40, 41, or 42 card.

The JCL to run this quick look retrieval and report is as follows:

```
//  EXEC EPRPM60,
//        MSTRFIL=EPMSTR2
//EDIT.INPUT DD *
$$SELECT TEST 6 - TSP EMISSIONS FOR COUNTY 0040 AS OF 4/1/80
10   1CNT E 0040           AND
10   POLL E 11101
20 QL
30 STTE CNTYX PLNTX
40 X STTE  CNTY  PLNT ESTIX
41   STTE  CNTY  PLNT  NPID ESTIX
$$END
/*
//
```

The $$SELECT card contains a title to appear on the quick look report: 'TEST 6-TSP EMISSIONS FOR COUNTY 0040 AS OF 4/1/80'. The 10 cards specify that all point source records with particulate data be selected for processing. Since all data to be included in the report is contained in the point source segment, 1CNT is used instead of CNTY on the 10 card. This is done so that only point source segments are tested against the selection criteria; all other segments will be bypassed. The 20 card specifies that a quick look report is to be generated. The 30 card specifies the sort order and page break for the quick look report; the report is to be ordered by state, county, and plant ID. Since data are selected for only one county, specifying a sort by county appears unneeded. It is included only to generate a total of estimated emissions for the entire county. (Totals are only generated when a data element for which page break/subtotalling is requested changes in value; the end of the master file is considered to represent a change in all fields. Thus, when the end of the master file is encountered, a total of estimated emissions will be generated for the county). The X following 40 on the 40 card specifies that detail lines are to be suppressed. The 40 card includes the data elements for which page break/subtotalling was requested on the 30 card, in the same order as they appeared on the 30 card. The 40 card also specifies that estimated emissions are to be totalled. A 41 card is also included (for illustrative purposes) to produce a second report showing the suppressed lines.

Figure 6.5.2-j shows the diagnostic report generated by the edit and extract programs, the first quick look report, and a sample page from the second quick look report. Note that when suppression is requested, a blank line is generated (instead of a page break) when one of the data elements on the 30 card changes in value.

Example 7. This example demonstrates how erroneous totals may be generated in a quick look report. Erroneous totals are generated when data elements are printed from a segment subordinate to the segment containing the totalled data elements. (Point segments are subordinate to plant segments; SCC segments and comment segments are subordinate to point segments.) In this example, property area (from the plant segment) and boiler design capacity (from the point source segment) are totalled while space heat (from the point source segment) is printed.

The JCL to run this quick look retrieval and report is as follows:

```
//  EXEC EPRPM60,
//        MSTRFIL=EPMSTR2,
//        ANSRFIL=QLANSR2
//EDIT.INPUT DD *
$$SELECT TEST 7 - EXAMPLE OF TOTALS OPTION   4/1/80
10   STTE E 06
20 QL AF
40   STTE  CNTY  PLNT  S1ID  PROPX BOILX SPAC
41   STTE  CNTY  PLNT  S1ID  PROP  BOILX SPAC
$$END
/*
//
```

The 10 card selects all records with state equal to 06. The 20 card specifies that a quick look report and an answer file are to be produced. The 40 card lists the data elements to be printed (state, county, plant, segment 1 ID, property area, boiler design capacity, and space heat percentage) and the data elements to be totalled (property area and boiler design capacity) in the first quick look report. The totals generated for property area in this report will be erroneous since data elements from a subordinate segment (boiler design capacity and space heat percentage) are printed. The 41 card specifies data elements to be printed and data elements to be totalled in the second quick look report. The second report is identical to the first except that the property area is not totalled. The second quick look report will contain only valid totals.

Figure 6.5.2-k shows the diagnostic reports from the edit and extract programs, the two quick look reports, and sample output from a list (produced by the master file detailed report program, PRPMSTR (EP0210), of the answer file. Note that the property area for each plant is added once for each point of the plant in the first quick look report.

6.5.2.4 Error Messages

QLE001 ERROR: NO $$SELECT CARD, RETRIEVAL REJECTED
Action: Enter the $$SELECT card as the first card of the quick look retrieval specifications. Resubmit the job.

QLE002 ERROR: INVALID DATA ELEMENT ON 10 CARD, RETRIEVAL REJECTED
Meaning: Columns six through nine of the 10 card contain an invalid data element abbreviation.
Action: Enter a valid data element abbreviation from Figure 6.5.2-d. Resubmit the job.

QLE003 ERROR: REPEATING FIELD - DATA ELEMENT POLL REQUIRED ON PREVIOUS 10 CARD, RETRIEVAL REJECTED
Meaning: A point source repeating data element abbreviation is entered on a 10 card but POLL was not used as the data element abbreviation on a preceding 10 card.
Action: Restructure the 10 cards so that POLL occurs on a 10 card before any use of a point source repeating data element on a 10 card. Resubmit the job.

QLE004 ERROR: REPEATING FIELD - DATA ELEMENT MPID REQUIRED ON PREVIOUS 10 CARD, RETRIEVAL REJECTED

Meaning: An SCC repeating data element abbreviation is entered on a 10 card, but MPID was not used as the data abbreviation on a preceding 10 card.

Action: Restructure the 10 cards so that MPID occurs on a 10 card before any use of an SCC repeating data element on a 10 card. Resubmit the job.

QLE005 ERROR: MORE THAN TWENTY 10 CARDS, RETRIEVAL REJECTED

Meaning: The retrieval specification cards contain over twenty 10 cards.

Action: Restructure the 10 cards so that no more than twenty 10 cards are entered. Resubmit the job.

QLE006 ERROR: INVALID RELATIONAL OPERATOR, RETRIEVAL REJECTED

Meaning: Column 10 of the 10 card contains an entry other than 'E', 'U', 'G', 'L', 'P', or 'B'.

Action: Correct the 10 card. Resubmit the job.

QLE007 ERROR: RELATIONAL OPERATOR MUST BE E, RETRIEVAL REJECTED

Meaning: When the data element abbreviation is 'POLL' or 'MPID', the relational operator in column 10 must be 'E'.

Action: Correct the 10 card. Resubmit the job.

QLE008 WARNING: VALUE SUPPLIED WITH P OR B, VALUE IGNORED

Meaning: When 'P' or 'B' is used for the relational operator in column 10 of a 10 card, the value in columns 13 through 24 should be blank. The value in columns 13 through 24 is ignored.

Action: No action is necessary if the retrieval generated by ignoring the value is the desired retrieval. Otherwise, correct the 10 card and resubmit the job.

QLE009 ERROR: VALUE TOO LONG, RETRIEVAL REJECTED

Meaning: The value starting in column 13 of the 10 card is longer than the data element represented by the data element abbreviation in columns six through nine. The value should be equal in length to the length of the data element in the master file (refer to Figure 6.5.2-d).

Action: Correct the 10 card. Resubmit the job.

QLE010 WARNING: VALUE SHORTER THAN FIELD

Meaning: The value starting in column 13 of the 10 card is shorter than the data element represented by the data element abbreviation in columns six through nine. The value should be equal in length to the length of the data element in the master file (refer to Figure 6.5.2-d) unless the length of the data element in the master file exceeds 12. For data elements longer than 12 characters, the 12 characters provided on the 10 card in columns 13 through 24 are compared to the first 12 characters of the field in the master file.

Action: If the data element in the master file is longer than 12 characters, no action is necessary. Otherwise, correct the 10 card and resubmit the job.

QLE011 ERROR: UNMATCHED PARENTHESES, RETRIEVAL REJECTED

Meaning: In the 10 cards, each left parenthesis is not paired with a right parenthesis or vice versa.

Action: Correct the 10 cards. Resubmit the job.

QLE012 ERROR: NESTED PARENTHESES, RETRIEVAL REJECTED

Meaning: Nested parentheses were encountered in the 10 cards. Nested parentheses are not allowed.

Action: Correct the 10 cards. Resubmit the job.

QLE013 ERROR: INVALID LEFT PARENTHESIS, RETRIEVAL REJECTED

Meaning: Column four of the 10 card contains a character other than '('.

Action: Correct the 10 card. Resubmit the job.

QLE014 ERROR: INVALID RIGHT PARENTHESIS, RETRIEVAL REJECTED

Meaning: Column 26 of the 10 card contains a character other than ')'.

Action: Correct the 10 card. Resubmit the job.

QLE015 ERROR: INVALID AND/OR CODE RETRIEVAL REJECTED

Meaning: Columns 28 through 30 of the 10 card contains an entry other than 'AND' or 'OR '.

Action: Correct the 10 card. Resubmit the job.

QLE016 ERROR: AND/OR ON LAST 10 CARD, RETRIEVAL REJECTED

Meaning: Columns 28 through 30 of the last 10 card should be blank.

Action: Correct the 10 card. Resubmit the job.

QLE017 WARNING: AND/OR MISSING, AND ASSUMED

Meaning: A 10 card other than the last 10 card has no entry in columns 28 through 30. It is assumed that columns 28 through 30 of this card contain 'AND'.

Action: No action is required if the retrieval generated is the desired retrieval. Otherwise, correct the 10 card and resubmit the job.

QLE018 WARNING: INVALID REPORT CODE ON 20 CARD

Meaning: Columns four through five or columns seven through eight of the 20 card contain an entry other than 'QL', 'TA', or 'AF'. The invalid code is ignored.

Action: No action is required if the desired output is produced. Otherwise, correct the 20 card and resubmit the job.

QLE019 ERROR: QUICK LOOK REPORT AND TURN-AROUND DOCUMENT REQUESTED, TURN-AROUND DOCUMENT DELETED

Meaning: The 20 card requests both a quick look report and a turnaround document. The turnaround document request is ignored.

Action: No action is required if the desired output is produced. Otherwise, correct the 20 card and resubmit the job.

QLE020 ERROR: DATA ELEMENT XXXX INVALID ON 30 CARD, RETRIEVAL REJECTED

Meaning: The invalid data element abbreviation XXXX was encountered on the 30 card.

Action: Enter only valid data element abbreviations from Figure 6.5.2-d on the 30 card. Resubmit the job.

QLE021 ERROR: SORT DATA ELEMENTS TOTAL MORE THAN 40 CHARACTERS, MASTER FILE ORDER USED

Meaning: The sum of the lengths (in the master file) of the data elements entered on the 30 card exceeds 40.

Action: No action is required if the quick look report or turnaround document produced is acceptable. Otherwise, alter the 30 card so that the sum of the lengths of the data elements does not exceed 40, and resubmit the job.

QLE022 ERROR: DATA ELEMENT XXXX INVALID ON 40, 41, OR 42 CARD; REPORT DELETED

Meaning: The invalid data element abbreviation XXXX was encountered on the 40, 41, or 42 card. The quick look report requested by this card was deleted but other quick look reports (if correctly requested) were produced.

Action: Enter only valid data element abbreviations from Figure 6.5.2-d on the 40, 41, or 42 card. Resubmit the job.

QLE023 WARNING: DATA ELEMENT XXXX UNSUITABLE FOR SUMMATION

Meaning: A totalling request was entered on the 40, 41, or 42 card for data element XXXX. Summation of XXXX is inappropriate and is not allowed. The quick look report was generated without totals for XXXX.

Action: No action is required.

QLE024 ERROR: QUICK LOOK LINE LONGER THAN 132, REPORT DELETED

Meaning: The total of the lengths of the data elements specified on the 40, 41, or 42 card for the quick look report exceeds 132. The quick look report requested by this card was deleted but other quick look reports (if correctly requested) were produced.

Action: Request fewer data elements in the quick look report. One possible solution is to break the requested quick look report into two quick look reports.

QLE025 ERROR: REQUEST FOR QUICK LOOK REPORT BUT NO 40 CARD, REPORT DELETED

Meaning: The 20 card contains 'QL', which requests a quick look report; however, no 40 card was found. Thus, no quick look report was generated. When a quick look report is requested, a 40 card must be entered (41 and 42 cards may also be entered). This message may also be generated if cards are not entered in the correct order.

Action: No action is necessary if no quick look report is desired. Otherwise, enter a 40 card and resubmit the job.

QLE026 ERROR: 40 CARD BUT NO REQUEST FOR QUICK LOOK REPORT, 40 CARD IGNORED

Meaning: A 40 card was encountered but the 20 card did not contain 'QL' to request a quick look report. The 40 card is ignored.

Action: No action is required if no quick look report is desired. Otherwise, correct the 20 card and resubmit the job.

QLE027 WARNING: NO $$END CARD

Meaning: No $$END card was encountered. The quick look retrieval was executed.

Action: No action is required. However, this error message may be avoided by entering a $$END card at the end of the quick look retrieval specifications.

QLE028 ERROR: REPEATING FIELD - DATA ELEMENT POLL REQUIRED ON 10 CARD, REPORT DELETED

Meaning: A point source repeating data element abbreviation was entered on a 40, 41, or 42 card. When this is done, POLL must be specified on a 10 card to specify which repeating section of the point source segment is desired.

Action: Correct the 10 cards or delete the repeating data element abbreviation(s) from the 40, 41, or 42 card.

QLE029 ERROR: REPEATING FIELD - DATA ELEMENT MPID REQUIRED ON 10 CARD, REPORT DELETED

Meaning: An SCC repeating data element abbreviation was entered on a 40, 41, or 42 card. When this is done, MPID must be specified on a 10 card to specify which repeating section of the SCC segment is desired.

Action: Correct the 10 cards or delete the repeating data element abbreviation(s) from the 40, 41, or 42 card.

QLE030 ERROR: PAGE BREAK/SUBTOTALLING MUST BE SPECIFIED WHEN SUPPRESSION IS REQUESTED, REPORT DELETED

Meaning: A 40, 41, or 42 card requests suppression. When this is done, page break/subtotalling must be requested for at least one data element on the 30 card. The quick look report requested by this 40, 41, or 42 card was deleted, but other quick look reports (if correctly requested) were produced.

Action: Remove the suppression request from the 40, 41, or 42 card or enter page break/subtotalling requests on the 30 card. Resubmit the job.

QLE031 ERROR: TOTALLING MUST BE SPECIFIED WHEN SUPPRESSION IS REQUESTED, REPORT DELETED

Meaning: A 40, 41, or 42 card requests suppression but does not request totalling. When suppression is requested, totalling must be requested for at least one data element. The quick look report requested by this 40, 41, or 42 card was deleted, but other quick look reports (if correctly requested) were produced.

Action: Correct the 40, 41, or 42 card. Resubmit the job.

QLE032 ERROR: REPORT REQUEST INCOMPATIBLE WITH PAGE BREAK REQUEST, REPORT DELETED

Meaning: A 40, 41, or 42 card is not compatible with the 30 card. Two situations could cause this: the data elements for which page break/subtotalling is requested on the 30 card do not appear on the 40, 41, or 42 card in the same order as they appear on the 30 card; or a totalling request is entered on the 40, 41, or 42 card for a data element which is entered on the 30 card with a page break/subtotalling request. The quick look report requested by this 40, 41, or 42 card was deleted, but other quick look reports (if correctly requested) were produced.

Action: Correct the 30 card or the 40, 41, or 42 card. Resubmit the job.

QLE033 ERROR: INVALID CARD TYPE, RETRIEVAL REJECTED

Meaning: An invalid card type was encountered, or the quick look retrieval specification cards were entered in the wrong order.

Action: Correct the card or reorder the cards. Resubmit the job.

QLE034 ERROR: NO QUICK LOOK CONTROL CARDS, RETRIEVAL REJECTED

Meaning: No quick look specification cards ($$SELECT through $$END) were found in the job stream. If quick look specification cards were in the job stream, they were probably entered in such a way that they were not associated with the data set for quick look specification cards.

Action: Enter quick look specification cards or correct the job stream. Resubmit the job.

QLE035 ERROR: NO 10 CARD, RETRIEVAL REJECTED

Meaning: No 10 card(s) were entered, or the 10 card(s) do not immediately follow the $$SELECT card.

Action: Enter 10 card(s) or reorder the cards. Resubmit the job.

QLE036 ERROR: NO 20 CARD, RETRIEVAL REJECTED

Meaning: No 20 card was entered, or the 20 card does not immediately follow the 10 card(s).

Action: Enter a 20 card or reorder the cards. Resubmit the job.

QLE037 ERROR: DATA ELEMENTS NOT ENTERED LEFT TO RIGHT ON 30 CARD, RETRIEVAL REJECTED

Meaning: The data element abbreviations on the 30 card were not entered left to right (starting in columns 4, 10, 16, 22, 28, and 34).

Action: Correct the 30 card. Resubmit the job.

QLE038 ERROR: DATA ELEMENTS NOT ENTERED LEFT TO RIGHT ON 40, 41, OR 42 CARD; REPORT DELETED

Meaning: The data element abbreviations on the 40, 41, or 42 card were not entered left to right (starting in columns 6, 12, 18, 24, 30, 36, 42, 48, 54, and 60). The quick look report requested by this 40, 41, or 42 card was deleted, but other quick look reports (if correctly requested) were produced.

Action: Correct the 40, 41, or 42 card. Resubmit the job.

6.5.2.5 Cataloged JCL

PRTQLED (EP0260) can be executed by any one of the cataloged procedures EPRTM40, EPRPM60, or EPRPM70. Each of these procedures is a multi-program procedure; therefore, the user should be careful to select the procedure which will produce the desired results. The procedure EPRTM40 should be used when an answer file is the only desired result. See Section 6.5.3.5 for a further discussion of this procedure.

The procedure EPRPM60 must be used when a quick look report is desired. An answer file is optional in this procedure. See Section 6.5.4.5 for a further discussion of EPRPM60.

The procedure EPRPM70 must be used when a turnaround document is desired. An answer file is optional in this procedure. See Section 6.5.5.5 for a further discussion of EPRPM70.

6.5.2.6 Warnings and Special Instructions

The user should exercise extreme care in coding quick look retrieval specification cards. A meaningless report or answer file can be generated by inappropriate specification cards. Also, report titles should be carefully chosen so that reports will be clearly identified. It is also recommended that these report titles contain a date for future reference.

6.5.2.7 Cost Considerations

The following estimates are for the execution of PRTQLED (EP0260) on an IBM 370/168:

Number of quick look control cards:	7 cards
CPU time:	0.25 seconds
I/O time:	0.49 seconds
Total time:	0.74 seconds
Estimated cost:	$0.14

6.5.2.8 Related Programs and Procedures

The procedure EPRTM40 executes PRTQLED (EP0260) and PRTQLEX (EP0270). The procedure EPRPM60 executes PRTQLED (EP0260), PRTQLEX (EP0270), and PRPQUIK (EP0280). The procedure EPRPM70 executes PRTQLED (EP0260), PRTQLEX (EP0270), and PRPTURN (EP0290). The user should select the procedure that will produce the desired results.

$$SELECT Card

Columns	Format	Symbol	Description
1 - 8	X - X	Alphanumeric	'$$SELECT'
9			Unused
10 - 72	X - X	Alphanumeric	Report Title
73 - 80			Unused

10 Card (Selection Criteria)

Columns	Format	Symbol	Description
1 - 2	XX	Numeric	'10'
3			Unused
4	X	Special Character	Left Parenthesis
5			Unused
6 - 9	XXXX	Alphanumeric	Data Abbreviation
10			Unused
11	X	Special Character	Relational Operator
12			Unused
13 - 24	X - X	Alphanumeric	Test Value
25			Unused
26	X	Special Character	Right Parenthesis
27			Unused
28 - 30	XXX	Special Characters	Boolean Operator
31 - 80			Unused

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Figure 6.5.2-a. Format of Quick Look Retrieval Specification Cards

20 Card (Output Specifications)

Columns	Format	Symbol	Description
1 - 2	XX	Numeric	'20'
3			Unused
4 - 5	XX	Special Characters	Report Code
6			Unused
7 - 8	XX	Special Characters	Report Code
9 - 80			Unused

30 Card (Report Order, Page Break/Subtotalling Specifications)

Columns	Format	Symbol	Description
1 - 2	XX	Numeric	'30'
3			Unused
4 - 7	XXXX	Alphanumeric	Data Abbreviation
8	X	Special Character	Page Break/ Subtotalling Request
9			Unused
10 - 13	XXXX	Alphanumeric	Data Abbreviation
14	X	Special Character	Page Break/ Subtotalling Request
15			Unused
16 - 19	XXXX	Alphanumeric	Data Abbreviation

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Figure 6.5.2-a - continued. Format of Quick Look Retrieval Specification Cards

30 Card - continued

Columns	Format	Symbol	Description
20	X	Special Character	Page Break/ Subtotalling Request
21			Unused
22 - 25	XXXX	Alphanumeric	Data Abbreviation
26	X	Special Character	Page Break/ Subtotalling Request
27			Unused
28 - 31	XXXX	Alphanumeric	Data Abbreviation
32	X	Special Character	Page Break/ Subtotalling Request
33			Unused
34 - 37	XXXX	Alphanumeric	Data Abbreviation
38	X	Special Character	Page Break/ Subtotalling Request
39 - 80			Unused

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Figure 6.5.2-a - continued. Format of Quick Look Retrieval Specification Cards

40, 41, 42 Cards (Quick Look Report Formats for One, Two, or Three Reports)

Columns	Format	Symbol	Description
1 - 2	XX	Numeric	'40', '41', or '42'
3			Unused
4	X	Special Character	Suppression Request
5			Unused
6 - 9	XXXX	Alphanumeric	Data Abbreviation
10	X	Special Character	Totalling Request
11			Unused
12 - 15	XXXX	Alphanumeric	Data Abbreviation
16	X	Special Character	Totalling Request
17			Unused
18 - 21	XXXX	Alphanumeric	Data Abbreviation
22	X	Special Character	Totalling Request
23			Unused
24 - 27	XXXX	Alphanumeric	Data Abbreviation
28	X	Special Character	Totalling Request
29			Unused
30 - 33	XXXX	Alphanumeric	Data Abbreviation
34	X	Special Character	Totalling Request
35			Unused
36 - 39	XXXX	Alphanumeric	Data Abbreviation

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Figure 6.5.2-a - continued. Format of Quick Look Retrieval Specification Cards

40, 41, 42 Cards - continued

Columns	Format	Symbol	Description
40	X	Special Character	Totalling Request
41			Unused
42 - 45	XXXX	Alphanumeric	Data Abbreviation
46	X	Special Character	Totalling Request
47			Unused
48 - 51	XXXX	Alphanumeric	Data Abbreviation
52	X	Special Character	Totalling Request
53			Unused
54 - 57	XXXX	Alphanumeric	Data Abbreviation
58	X	Special Character	Totalling Request
59			Unused
60 - 63	XXXX	Alphanumeric	Data Abbreviation
64	X	Special Character	Totalling Request
65 - 80			Unused

$$END Card

Columns	Format	Symbol	Description
1 - 5	XXXXX	Special Characters	'$$END'
6 - 80			Unused

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Figure 6.5.2-a - continued. Format of Quick Look Retrieval Specification Cards

$$SELECT Card: This card is required and signals the beginning of the quick look specification cards.

1. '$$SELECT': Required.

2. Report Title: Enter a title to appear on the quick look report or reports (see 40, 41 and 42 cards) or on the turnaround document. The title will also appear on the diagnostic report produced by the quick look edit program. The title should be chosen carefully because it is the only means of identifying a report which has been separated from the run stream. A date may be included in the title to date the reports.

10 Card: One 10 card is required, up to twenty 10 cards are allowed to specify the selection criteria.

1. '10': Required.

2. Left Parenthesis: Enter '(' if this 10 card is the first of a number of 10 cards to be grouped together.

3. Data Abbreviation: Enter one of the valid abbreviations for data fields on the master file. The valid abbreviations are shown in Figure 6.5.2-d. The data field specified by the data abbreviation will be compared to the test value to determine which records from the master file are to be selected for processing.

4. Relational Operator: Enter one of the following codes: 'E' for equal, 'U' for unequal, 'G' for greater than, 'L' for less than, 'P' for present (non-blank), or 'B' for blank.

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Figure 6.5.2-b. Description of Quick Look Retrieval Specification Fields

5. Test Value: This field is left blank if the relational operator is P or B. Otherwise enter a value (beginning in column 13) to which the field specified by the data abbreviation will be compared. The length of the test value should equal the length (on the master file) of the data field being compared. If the data field is over 12 characters in length, the twelve characters in the test value field are compared to the first 12 characters of the field on the master file. Numeric test values must be expressed as they appear on the master file: zero-filled and with no decimal. For example, for control equipment cost, a test value of $2500.00 would be entered as 0250000.

6. Right Parenthesis: Enter ')' if this 10 card is the last of a number of 10 cards to be grouped together.

7. Boolean operator: Enter 'AND' or 'OR ' if the relational expression on this 10 card is to be combined with the relational expression on the next 10 card by the 'AND' or 'OR' boolean operator. This field must be blank on the last 10 card. If this field is blank on any but the last 10 card, it is assumed to have a value of 'AND'.

20 Card: This card is required to specify the outputs desired.

1. '20': Required.

2. Report Code: Enter one of the following codes to specify the desired output: 'QL' for quick look report, 'TA' for turnaround document, 'AF' for answer file. Only one of 'QL' and 'TA' may be specified in a given execution of the quick look programs, but 'AF' may be specified in

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Figure 6.5.2-b - continued. Description of Quick Look Retrieval Specification Fields

conjunction with either of the other two codes. The codes may be entered in any order on the 20 card.

30 Card: This card is optional. It specifies the order of the quick look report or turnaround document and includes page break/subtotalling requests for the quick look report.

1. '30': Required.

2. Data Abbreviation: Enter one of the valid abbreviations for data fields on the master file. The valid abbreviations are shown in Figure 6.5.2-d. Enter abbreviations from left to right on the 30 card in the order of their priority in the sort order of the reports. The report order specified will determine the order of data in the quick look report or the turnaround document, but will not affect the order of the answer file. (The answer file will have the same order as the input master file.) The sorts are always in ascending order with the specified data fields.

3. Page Break/Subtotalling Request: Each page break/subtotalling request is associated with the data abbreviation immediately preceding it on the 30 card. Enter 'X' to request a page break in the quick look report when the data field represented by the associated data abbreviation changes in value. If totals are requested on the 40, 41, or 42 card for any data field in the quick look report, a subtotal for the field(s) will be printed before the page break in the quick look report(s). A page break/subtotalling request on the 30 card and a totalling request on the 40, 41, or 42 card cannot be entered for the same data element. The page

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Figure 6.5.2-b - continued. Description of Quick Look Retrieval Specification Fields

break/subtotalling request does not affect the turnaround document or the answer file.

40, 41, 42 Cards: These cards are optional. They are entered when QL is specified on the 20 card. They specify the content of quick look reports. They may also specify totalling of certain fields and suppression of all but the total lines. Each card generates a quick look report.

1. '40', '41', or '42': Required. The following combinations are allowed: A 40 card, a 40 card followed by a 41 card, a 40 card followed by a 41 card followed by a 42 card. The 41 and 42 cards specify additional report formats from the same quick look retrieval run.

2. Suppression Request: Enter 'X' to suppress the printing of detailed lines in the quick look report (only headings, subtotals, and totals would be printed). If suppression is requested, totalling of at least one data field must be requested on the same 40, 41, or 42 card and page break/subtotalling must be requested for at least one data field on the 30 card. Also, each data field for which page break/subtotalling is requested on the 30 card must be listed on the 40, 41, or 42 card. These fields must appear in the same order on the 40, 41, or 42 card as they appear on the 30 card.

3. Data Abbreviation. Enter one of the valid abbreviations for data fields on the master file. The valid abbreviations and data element lengths are shown in Figure 6.5.2-d. The total of the lengths of the elements on any 40, 41, or 42 card cannot exceed 132 characters. To determine the total lengths, sum the lengths for the data elements found in Figure 6.5.2-d

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Figure 6.5.2-b - continued. Description of Quick Look Retrieval Specification Fields

under the column "Data Element Length In Quick Look Report" or, if the data element is totalled, "Data Element Length In Quick Look Report If Totalled." If the total exceeds 132, delete some of the fields or break the report into two quick look reports. Enter abbreviations left to right on the 40, 41, or 42 card in the order that the data fields are to appear in the quick look report. If a 30 card is entered that specifies page break/subtotalling when certain data fields change in value, the fields for which page break/subtotalling is requested must be entered on the 40, 41, or 42 card in the same order that they appear on the 30 card.

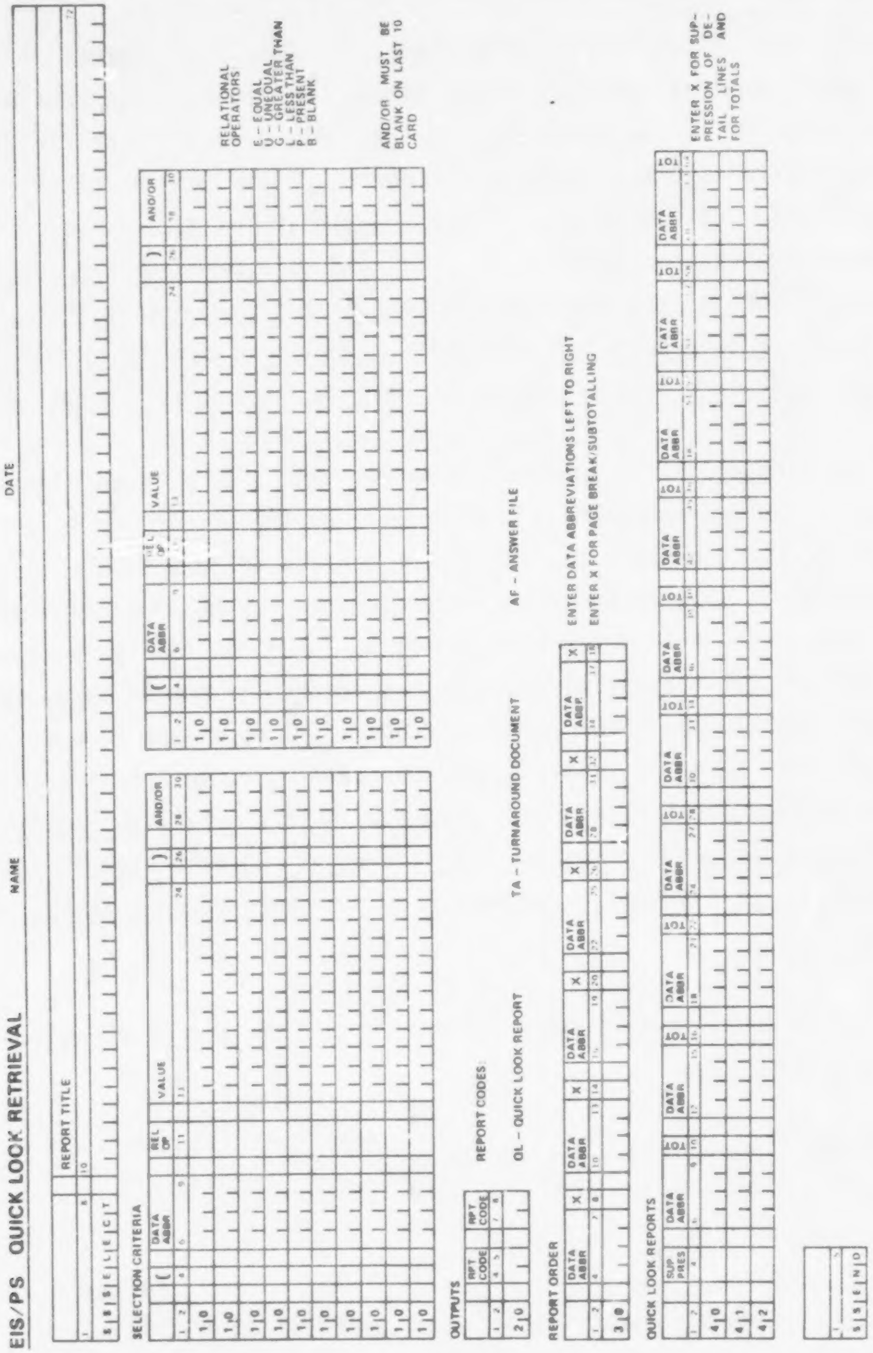
4. Totalling Request. Each totalling request is associated with the data abbreviations immediately preceding it on the 40, 41, or 42 card. Enter 'X' to request the totalling of the associated data field. A totalling request is allowed for those data elements having an entry under "Data Element Length In Quick Look Report If Totalled" in Figure 6.5.2-d. If page break/subtotalling requests are entered on the 30 card, subtotals will be computed before each page break. A totalling request on the 40, 41, or 42 card and a page break/subtotalling request on the 30 card cannot be entered for the same data element. When a totalling request is entered on a 40, 41, or 42 card for a data element, NO data element from a subordinate master file segment should be entered on that 40, 41, or 42 card.

$$END Card: This card is required and signals the end of the quick look retrieval specifications.

1. '$$END': Required.

(Page 5 of 5)

Figure 6.5.2-b - continued. Description of Quick Look Retrieval Specification Fields



EIS/PS QUICK LOOK RETRIEVAL

NAME

DATE

REPORT TITLE

$ $ S E L E C T

SELECTION CRITERIA

(DATA ABBR REL OP VALUE) AND/OR

1 0

OUTPUTS

RPT CODE RPT CODE

2 0

REPORT CODES:

QL – QUICK LOOK REPORT

TA – TURNAROUND DOCUMENT

AF – ANSWER FILE

REPORT ORDER

DATA ABBR X DATA ABBR X DATA ABBR X DATA ABBR X DATA ABBR X DATA ABBR X DATA ABBR X

3 0

ENTER DATA ABBREVIATIONS LEFT TO RIGHT

ENTER X FOR PAGE BREAK/SUBTOTALLING

QUICK LOOK REPORTS

SUP PRES DATA ABBR TOT DATA ABBR TOT DATA ABBR TOT DATA ABBR TOT DATA ABBR TOT DATA ABBR TOT DATA ABBR TOT DATA ABBR TOT DATA ABBR TOT DATA ABBR TOT

4 0

4 1

4 2

$ $ E N D

RELATIONAL OPERATORS

E – EQUAL
U – UNEQUAL
G – GREATER THAN
L – LESS THAN
P – PRESENT
B – BLANK

AND/OR MUST BE BLANK ON LAST 10 CARD

ENTER X FOR SUPPRESSION OF DETAIL LINES AND FOR TOTALS

Figure 6.5.2-c. Quick Look Coding Form

DATA ELEMENTS COMMON TO ALL SEGMENTS

DATA ELEMENT	ABBRE-VIATION	POSITION IN MASTER FILE	DATA ELEMENT LENGTH		
			IN MASTER FILE	IN QUICK LOOK REPORT	IN QUICK LOOK REPORT IF TOTALLED
AQCR	AQCR	50	3	5	N/A
County	CNTY	46	4	5	N/A
Plant	PLNT	53	4	5	N/A
Segment Date	DATE	57	5	6	N/A
Segment Day	DAYY	59	3	5	N/A
Segment ID	SEGM	57	2	5	N/A
Segment Year	YEAR	62	1	5	N/A
State	STTE	44	2	5	N/A

DATA ELEMENTS COMMON TO POINT, SCC, and COMMENT SEGMENTS

NEDS Point ID	NPID	63	2	5	N/A

(Page 1 of 9)

Figure 6.5.2-d. Quick Look Data Element Abbreviations

PLANT SEGMENT DATA ELEMENTS

DATA ELEMENT	ABBREVIATION	POSITION IN MASTER FILE	DATA ELEMENT LENGTH		
			IN MASTER FILE	IN QUICK LOOK REPORT	IN QUICK LOOK REPORT IF TOTALLED
AQCR	0AQC	50	3	5	N/A
City	CITY	82	4	5	N/A
Contact	CONT	89	15	16	N/A
County	0CNT	46	4	5	N/A
Local Control	LCON	68	2	5	N/A
Mailing Address	MAIL	182	48	49	N/A
Name and Address	NAAD	124	48	49	N/A
No. of Employees	NUME	172	4	5	9
Ownership	OWNS	88	1	5	N/A
Plant ID	0PLN	53	4	5	N/A
Principal Product	PROD	114	10	11	N/A
Property Area	PROP	176	6	8	13
Segment Date	0DTE	57	5	6	N/A
Segment Day	0DAY	59	3	5	N/A
Segment ID	0SEG	62	1	5	N/A
Segment Year	0YER	57	2	5	N/A
State	0STT	44	2	5	N/A
Telephone	TELE	104	10	11	N/A
User Control Region	UCON	65	3	5	N/A
User Plant ID	UPLT	70	12	13	N/A
UTM Zone	UTMZ	86	2	5	N/A

0 Denotes zero

(Page 2 of 9)

Figure 6.5.2-d - continued. Quick Look Data Element Abbreviations

POINT SEGMENT DATA ELEMENTS

			DATA ELEMENT LENGTH		
DATA ELEMENT	ABBREVIATION	POSITION IN MASTER FILE	IN MASTER FILE	IN QUICK LOOK REPORT	IN QUICK LOOK REPORT IF TOTALLED
AQCR	1AQC	50	3	5	N/A
Boiler Design Capacity	BOIL	109	5	11	11
Control Regulations	CREG	160	12	13	N/A
Control Regulation 1	REG1	160	4	5	N/A
Control Regulation 2	REG2	164	4	5	N/A
Control Regulation 3	REG3	168	4	5	N/A
Compliance Schedule	CSCH	149	4	5	N/A
Comp. Schedule Month	SCHM	151	2	5	N/A
Comp. Schedule Year	SCHY	149	2	5	N/A
Compliance Status	CSTT	148	1	5	N/A
Compliance Update	CUPD	153	6	7	N/A
Comp. Update Day	CUDY	157	2	5	N/A
Comp. Update Month	CUMN	155	2	5	N/A
Comp. Update Year	CUYR	153	2	5	N/A
County	1CNT	46	4	5	N/A
ECAP	ECAP	159	1	5	N/A
Exhaust Flow Rate	FLOW	128	7	8	N/A
IPP Code	IPPC	72	2	5	N/A
Latitude	LATT	83	6	7	N/A
Latitude Degree	LATD	83	2	5	N/A
Latitude Minute	LATM	85	2	5	N/A
Latitude Second	LATS	87	2	5	N/A

(Page 3 of 9)

Figure 6.5.2-d - continued. Quick Look Data Element Abbbreviations

POINT SEGMENT DATA ELEMENTS (continued)

DATA ELEMENT	ABBRE- VIATION	POSITION IN MASTER FILE	DATA ELEMENT LENGTH IN MASTER FILE	IN QUICK LOOK REPORT	IN QUICK LOOK REPORT IF TOTALLED
Longitude	LONG	89	7	8	N/A
Longitude Degree	LOND	89	3	5	N/A
Longitude Minute	LONM	92	2	5	N/A
Longitude Second	LONS	94	2	5	N/A
NEDS Point ID/SEGMENT 1	S1ID	63	2	5	N/A
Normal Operating Rate	NORM	104	5	6	N/A
Number of Pollutants	NUMP	239	2	5	N/A
Plant ID	1PLN	53	4	5	N/A
Plume Height	PLUM	140	4	5	N/A
Point IDs	PTID	63	5	6	N/A
Points w/ Common Stack	PWCS	144	4	5	N/A
Segment Date	1DTE	57	5	6	N/A
Segment Day	1DAY	59	3	5	N/A
Segment ID	1SEG	62	1	5	N/A
Segment Year	1YER	57	2	5	N/A
SIC Code	SICC	68	4	5	N/A
Space Heat %	SPAC	114	3	5	N/A
Stack Data	STAD	117	27	28	N/A
Stack Diameter	DIAM	121	3	5	N/A
Stack Height	HGHT	117	4	5	N/A
Stack Temperature	TEMP	124	4	5	N/A
State	1STT	44	2	5	N/A

(Page 4 of 9)

Figure 6.5.2-d - continued. Quick Look Data Element Abbreviations

POINT SEGMENT DATA ELEMENTS (continued)

DATA ELEMENT	ABBRE-VIATION	POSITION IN MASTER FILE	DATA ELEMENT LENGTH IN MASTER FILE	IN QUICK LOOK REPORT	IN QUICK LOOK REPORT IF TOTALLED
Throughput	THRU	96	8	9	N/A
Throughput/Dec-Feb	WNTR	96	2	5	N/A
Throughput/Jun-Aug	SUMM	100	2	5	N/A
Throughput/Mar-May	SPNG	98	2	5	N/A
Throughput/Sep-Nov	FALL	102	2	5	N/A
User Point ID	UPID	65	3	5	N/A
UTM Coordinates	UTMC	74	9	10	N/A
UTM Horizontal	HORZ	74	4	6	N/A
UTM Vertical	VERT	78	5	7	N/A
Velocity	VELO	135	5	6	N/A

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Figure 6.5.2-d - continued. Quick Look Data Element Abbreviations

REPEATING POINT SEGMENT DATA ELEMENTS
(POLL must be specified)

DATA ELEMENT	ABBRE-VIATION	POSITION IN MASTER FILE	DATA ELEMENT LENGTH IN MASTER FILE	IN QUICK LOOK REPORT	IN QUICK LOOK REPORT IF TOTALLED
Control Equipment	CEQP	253	6	7	N/A
Control Equip. Cost	CCST	246	7	9	14
Emission Units	EUNT	290	1	5	N/A
Emissions Allowable	ALLO	276	7	8	13
Emissions Estimate	ESTI	262	7	8	13
Emissions Measured	MEAS	269	7	8	13
Est Control Efficiency	ECEF	259	3	5	N/A
Estimation Method	ESTM	291	1	5	N/A
Pollutant ID	POLL	241	5	6	N/A
Primary Control Equip	PCTL	253	3	5	N/A
Secondary Control Equip	SCTL	256	3	5	N/A
Test Method	TSTM	292	1	5	N/A

(Page 6 of 9)

Figure 6.5.2-d - continued. Quick Look Data Element Abbreviations

SCC SEGMENT DATA ELEMENTS

DATA ELEMENT	ABBRE-VIATION	POSITION IN MASTER FILE	DATA ELEMENT LENGTH IN MASTER FILE	IN QUICK LOOK REPORT	IN QUICK LOOK REPORT IF TOTALLED
AQCR	2AQC	50	3	5	N/A
Ash Content	ASHC	98	3	5	N/A
BEC Code	BECC	75	5	6	N/A
BEC ID	BECI	78	2	5	N/A
BEC Number	BECN	75	3	5	N/A
Confidentiality	CONF	106	1	5	N/A
County	2CNT	46	4	5	N/A
Emission Factor Source	EMFS	133	1	5	N/A
Fuel Process Rate	FPRT	81	7	8	13
Fuel Units	FUNT	80	1	5	N/A
Heat Content	HEAT	101	5	6	N/A
Maximum Design Rate	MDRT	88	7	9	14
NEDS Point ID/Segment 2	S2ID	63	2	5	N/A
No. of Emission Factors	NEMF	197	2	5	N/A
Plant ID	2PLN	53	4	5	N/A
Source Classification Code	SCCC	65	8	9	N/A
SCC 1	SCC1	65	1	5	N/A
SCC 2	SCC2	66	2	5	N/A
SCC 3	SCC3	68	3	5	N/A
SCC 4	SCC4	71	2	5	N/A
SCC Sequence Number	SSQN	73	2	5	N/A

(Page 7 of 9)

Figure 6.5.2-d - continued. Quick Look Data Element Abbreviations

SCC SEGMENT DATA ELEMENTS (continued)

DATA ELEMENT	ABBRE-VIATION	POSITION IN MASTER FILE	DATA ELEMENT LENGTH IN MASTER FILE	DATA ELEMENT LENGTH IN QUICK LOOK REPORT	DATA ELEMENT LENGTH IN QUICK LOOK REPORT IF TOTALLED
Segment Date	2DTE	57	5	6	N/A
Segment Day	2DAY	59	3	5	N/A
Segment ID	2SEG	62	1	5	N/A
Segment Year	2YER	57	2	5	N/A
Source Code	SRCC	107	1	5	N/A
Source Description	SRCD	108	25	26	N/A
State	2STT	44	2	5	N/A
Sulfur Content	SULC	95	3	5	N/A

Repeating SCC SEGMENT DATA ELEMENTS

(MPID must be specified)

DATA ELEMENT	ABBRE-VIATION	POSITION IN MASTER FILE	DATA ELEMENT LENGTH IN MASTER FILE	DATA ELEMENT LENGTH IN QUICK LOOK REPORT	DATA ELEMENT LENGTH IN QUICK LOOK REPORT IF TOTALLED
Ash/Sulfur Code	ASSC	214	1	5	N/A
Emission Factor	EMFA	204	9	11	N/A
Emission Factor Units	EMFU	215	1	5	N/A
Pollutant ID	MPID	199	5	6	N/A

(Page 8 of 9)

Figure 6.5.2-d - continued. Quick Look Data Element Abbreviations

COMMENT SEGMENT DATA ELEMENTS

			DATA ELEMENT LENGTH		
DATA ELEMENT	ABBRE-VIATION	POSITION IN MASTER FILE	IN MASTER FILE	IN QUICK LOOK REPORT	IN QUICK LOOK REPORT IF TOTALLED
AQCR	3AQC	50	3	5	N/A
Comments	COMM	71	102	99	N/A
County	3CNT	46	4	5	N/A
Left Comment	LCMT	71	51	52	N/A
Line Number	LINE	67	3	5	N/A
NEDS Point ID/Segment 3	S3ID	63	2	5	N/A
Plant ID	3PLN	53	4	5	N/A
PNR Sequence Number	SEQN	65	2	5	N/A
Right Comment	RCMT	122	51	52	N/A
Segment Date	3DTE	57	5	6	N/A
Segment Day	3DAY	59	3	5	N/A
Segment ID	3SEG	62	1	5	N/A
Segment Year	3YER	57	2	5	N/A

(Page 9 of 9)

Figure 6.5.2-d - continued. Quick Look Data Element Abbreviations

```
...................................................................................................................
                                  EIS/PS QUICK LOOK EDIT PROGRAM  -  DIAGNOSTIC REPORT                  PAGE    1
...................................................................................................................
PROGRAM NAME: PRTQLED (EP0260)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980
...................................................................................................................
TITLE  TEST 1 - PLANTS IN STATE 06 AS OF 4/1/80
...................................................................................................................


SELECTION CRITERIA

10   QSTT E 06


REPORT FORMATS

20 QL


REPORT SEQUENCE

     DEFAULT REPORT SEQUENCE, SAME AS MASTER FILE ORDER


QUICK LOOK DATA ELEMENTS - REPORT ONE

40   PLNT  NAAD  MAIL  CONT  TELE
     PLANT ID
     NAME AND ADDRESS
     MAILING ADDRESS
     CONTACT
     TELEPHONE
```

Figure 6.5.2-e. Output from Example 1 -- PRTQLED (EP0260) (Page 1 of 3)

```
                     EIS/PS QUICK LOOK EXTRACT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE    1

PROGRAM NAME: PRTQLEX (EP0270)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF EIS/PS MASTER FILE RECORDS READ:              172
NUMBER OF QUICK LOOK REPORT RECORDS WRITTEN:              4
NUMBER OF TURNAROUND DOCUMENT RECORDS WRITTEN:            0
NUMBER OF ANSWER FILE RECORDS WRITTEN:                    0
```

(Page 2 of 3)

Figure 6.5.2-e-continued. Output from Example 1 -- PRTQLEX (EP0270)

```
PROGRAM NAME: PRPQUIK (EP0280)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980


---------------------------------------------------------------------------------------------------------------------------------

***************************************************************************************************************************
                                       EMISSIONS INVENTORY SYSTEM / POINT SOURCE SUBSYSTEM                         PAGE    1
***************************************************************************************************************************
TEST 1 - PLANTS IN STATE 06 AS OF 4/1/80
***************************************************************************************************************************
PLNT NAME-AND-ADDRESS                              MAILING-ADDRESS                              CONTACT        TELEPHONE
***************************************************************************************************************************
0001 SYMTHE ENGINE CO                              RED OAKE, COLORADO                           FRANKE SMYTHE  5919544376
0041 SYMTHE ENGINE CO                              TWILITES, COLORADO                           GEORGE SMYTHE  6919544376
A041 HANSON OIL SI CO                              TWILITES, COLORADO                           GEORGE SMYTHE  7919544376
A0A1 HANSON ENGINE CO                              RED OAKE, COLORADO                           GEORGE SMYTHE  2919544376

TOTAL NUMBER OF QUICK LOOK LINES EQUALS       4
```

(Page 3 of 3)

Figure 6.5.2-e-continued. Output from Example 1 -- PRPQUIK (EP0280)

```
****************************************************************************************************
                                 EIS/PS QUICK LOOK EDIT PROGRAM  -  DIAGNOSTIC REPORT                     PAGE   1
****************************************************************************************************
PROGRAM NAME: PRTQLED (EP0260)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980
****************************************************************************************************
TITLE  TEST 2 - PRODUCE AN ANSWER FILE WITH S02 DATA     4/1/80
****************************************************************************************************


SELECTION CRITERIA

10   POLL E 42401          OR
10   MPID E 42401


REPORT FORMATS

20 AF


REPORT SEQUENCE

     DEFAULT REPORT SEQUENCE, SAME AS MASTER FILE ORDER

----------------------------------------------------------------------------------------------------

                      EIS/P&R QUICK LOOK RETRIEVAL PROGRAM  -  DIAGNOSTIC REPORT                       PAGE    1

PROGRAM NAME: PRTQLE4 (EP0270)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF EIS/PS MASTER FILE RECORDS READ:               172
NUMBER OF QUICK LOOK REPORT RECORDS WRITTEN:               0
NUMBER OF TURNAROUND DOCUMENT RECORDS WRITTEN:             0
NUMBER OF ANSWER FILE RECORDS WRITTEN:                    34
```

(Page 1 of 2)

Figure 6.5.2-f. Output from Example 2 -- Diagnostic Reports

```
                                    EIS/PS MASTER FILE DETAILED REPORT                                          PAGE   4


            STATE COUNTY AQCR PLANT ID
              18   0040   224   0005

  DATE     SEGMENT   CONTROL  LOCAL                                                                        PRINCIPAL
YEAR DAY    TYPE     REGION   CONTROL   PLANT ID    CITY UTM ZONE OWNER     CONTACT        TELEPHONE    PRODUCT
 80  000     0                                            17      F    W R TENAS

                                                     NUMBER OF  PROPERTY
ESTABLISHMENT NAME AND ADDRESS             ZIP      EMPLOYEES    AREA     MAILING ADDRESS                          ZIP
DENNER AIR PORT

                                                      NEDS FLAG  PLANT FLAG  E I S   F L A G S
P7 PLANT COMMENT                                         P1          P7        1   2   3   4
                                                         A                     A   A   A

  DATE    SEGMENT POINT   USER                  UTM COORDINATES    LATITUDE     LONGITUDE   ANNUAL THRUPUT   NORMAL OPERATING
YEAR DAY   TYPE    ID   POINT ID SIC  IPP HORIZONTAL VERTICAL DEG MIN SEC  DEG MIN SEC  DEC MAR JUN SEP  HR/D D/WK WK/YR
 75  000    1      07            9661       457.8     4188.7                            25  25  25  25    24   7    52

BOILER   SPACE  S    T    A    C    K           D    A    T    A        COMP SCHED   COMP STATUS          CONTROL REGULATION
CAPACITY HEAT   HEIGHT DIAM TEMP FLOW RATE VELOCITY PLUME PNTS  COMP YEAR MONTH  YEAR MONTH DAY  ECAP REG 1 REG 2 REG 3
                                                     0020         4

                                                      N E D S    F L A G S  POINT FLAG  E I S   F L A G S
P7 POINT COMMENT                                      P2  P3  P4  P5  PMCS      P7         11   12   14
                                                       A       A   A                        A    A

NUMBER OF  POLLUTANT CONTROL  CONTROL EQUIP ESTM CNTL        E  M  I  S  S  I  O  N  S                ESTM   TEST  EIS FLG
POLLUTANTS    ID       COST      PRI  SEC   EFFICIENCY ESTIMATE MEASURED ALLOWABLE POTENTIAL UNITS METHOD METHOD   13
   05        SO2                                      0000002                                      3              A
             NOX                                      0000004                                      3              A
             TSP                                      0000008                                      3              A
             CO                                       0000000                                      3              A
             HC                                       0000001                     0000001          3              A
```

(Page 2 of 2)

Figure 6.5.2-f-continued. Output from Example 2 -- Detailed Report

```
************************************************************************************************************************************
                                        EIS/PS QUICK LOCK EDIT PROGRAM  -  DIAGNOSTIC REPORT                           PAGE    1
************************************************************************************************************************************
PROGRAM NAME: PRTQLED (EP0260)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980
************************************************************************************************************************************
TITLE  TEST 3 - TURNAROUND DOCUMENT     4/1/80
************************************************************************************************************************************


SELECTION CRITERIA

10   STTE E 06             AND
10   CNTY E 1960           AND
10   PLNT E 0041

REPORT FORMATS

20 TA

REPORT SEQUENCE

     DEFAULT REPORT SEQUENCE, SAME AS MASTER FILE ORDER


------------------------------------------------------------------------------------------------------------------------------------

                              EIS/PS QUICK LOOK EXTRACT PROGRAM  -  DIAGNOSTIC REPORT                                 PAGE     1


PROGRAM NAME: PRTQLEX (EP0270)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF EIS/PS MASTER FILE RECORDS READ:             172
NUMBER OF QUICK LOOK REPORT RECORDS WRITTEN:             0
NUMBER OF TURNAROUND DOCUMENT RECORDS WRITTEN:          22
NUMBER OF ANSWER FILE RECORDS WRITTEN:                   0
```

Figure 6.5.2-g. Output from Example 3 -- Diagnostic Reports (Page 1 of 2)

```
*******************************************************************************************************************
                                        EIS/PS QUICK LOOK EDIT PROGRAM  -  DIAGNOSTIC REPORT                PAGE   1
*******************************************************************************************************************
PROGRAM NAME: PRTQLED (EP0260)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980
*******************************************************************************************************************
TITLE  TEST 4 - HYDROCARBON EMISSIONS FOR COUNTY 0040 AS OF 4/1/80
*******************************************************************************************************************


SELECTION CRITERIA

10   ICNT E 0040            AND
10   POLL E 43101           AND
10 ( ESTI P                 OR
10   ALLO P              )


REPORT FORMATS

20 QL


REPORT SEQUENCE

30 ESTI  ALLO
     EMISSIONS ESTIMATE
     ALLOWABLE EMISSIONS


QUICK LOOK DATA ELEMENTS - REPORT ONE

40   STTE  CNTY  PLNT  NPID  ESTIX ALLOX
     STATE
     COUNTY
     PLANT ID
     NEDS POINT ID
     EMISSIONS ESTIMATE        TOTAL
     ALLOWABLE EMISSIONS       TOTAL
```

(page 1 of 2)

Figure 6.5.2-h. Output from Example 4 -- PRTQLED (EP0260)

```
                 EIS/PS QUICK LOOK EXTRACT PROGRAM  -  DIAGNOSTIC REPORT                                PAGE    1

 PROGRAM NAME: PRTQLEX (EP0270)
 REVISION LEVEL: 1-00
 LAST UPDATE #: P-1
 DATE INCORPORATED: FEBRUARY 1, 1980

 NUMBER OF EIS/PS MASTER FILE RECORDS READ:              172
 NUMBER OF QUICK LOOK REPORT RECORDS WRITTEN:             23
 NUMBER OF TURNAROUND DOCUMENT RECORDS WRITTEN:            0
 NUMBER OF ANSWER FILE RECORDS WRITTEN:                    0
------------------------------------------------------------------------------------------------------------

 ...........................................................................................................
                           EMISSIONS INVENTORY SYSTEM / POINT SOURCE SUBSYSTEM                   PAGE   1
 ...........................................................................................................
 TEST 4 - HYDROCARBON EMISSIONS FOR COUNTY 0040 AS OF 4/1/80
 ...........................................................................................................
 SITE CNTY PLNT PNID       EM-ESTI       EM-ALLO
 ...........................................................................................................
 18   0040 0001 01         0000000
 18   0040 0002 01         0000000
 18   0040 0005 01         0000000
 18   0040 0005 02         0000000
 18   0040 0005 03         0000000
 18   0040 0005 04         0000000
 18   0040 0005 05         0000000
 34   0040 0006 01         0000000
 34   0040 0001 01         0000000       9999999
 34   0040 0001 02         0000000       9999999
 34   0040 0001 03         0000000       9999999
 34   0040 0001 04         0000000       9999999
 34   0040 0003 01         0000000       9999999
 34   0040 0004 01         0000000       9999999
 34   0040 0005 02         0000000       9999999
 34   0040 0005 03         0000000       9999999
 34   0040 0006 02         0000000       9999999
 34   0040 0006 03         0000000       9999999
 34   0040 0007 01         0000000       9999999
 34   0040 0008 01         0000000       9999999
 18   0040 0005 07         0000001
 18   0040 0005 06         0000002
 34   0040 0005 01         0000002       9999999
                      000000000005  000129999987

 TOTAL NUMBER OF QUICK LOOK LINES EQUALS      23
```

(Page 2 of 2)

Figure 6.5.2-h-continued. Output from Example 4 -- PRTQLEX (EP0270) and PRPQUIK (EP0280)

```
..........................................................................................................................
                           EIS/PS QUICK LOOK EDIT PROGRAM  =  DIAGNOSTIC REPORT                             . PAGE    1
..........................................................................................................................
PROGRAM NAME: PRTQLED (EP0260)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980
..........................................................................................................................
TITLE  TEST 5 = STACK DATA FOR COUNTY 0040 IN STATE 34 AS OF 4/1/80
..........................................................................................................................


SELECTION CRITERIA

10   ISTT E 34              AND
10   ICNT E 0040


REPORT FORMATS

20 QL


REPORT SEQUENCE

30 PLNTX NPID
     PLANT ID                     PAGE BREAK/SUBTOTAL
     NEDS POINT ID


QUICK LOOK DATA ELEMENTS - REPORT ONE

40   PLNT  NPID  HGHT  DIAM  TEMP  FLOW  VELO  PLUM  PACS
     PLANT ID
     NEDS POINT ID
     STACK HEIGHT
     STACK DIAMETER
     STACK TEMPERATURE
     EXHAUST FLOW RATE
     VELOCITY
     PLUME HEIGHT
     POINTS W/ COMMON STACK


QUICK LOOK DATA ELEMENTS - REPORT TWO

41   PLNT  NPID  HGHT  DIAM  TEMP  FLOW  VELO  PLUM  PACS  BOILX
     PLANT ID
     NEDS POINT ID
     STACK HEIGHT
```

(Page 1 of 2)

Figure 6.5.2-i. Output from Example 5 -- PRTQLED (EP0260)

```
*********************************************************************************************************************
                                 EIS/PS QUICK LOOK EDIT PROGRAM  -  DIAGNOSTIC REPORT
*********************************************************************************************************************
                                                                                                            PAGE   2
TITLE  TEST 5 - STACK DATA FOR COUNTY 0000 IN STATE 34 AS OF 4/1/80
*********************************************************************************************************************

     STACK DIAMETER
     STACK TEMPERATURE
     EXHAUST FLOW RATE
     VELOCITY
     PLUME HEIGHT
     POINTS W/ COMMON STACK
     BOILER DESIGN CAPACITY   TOTAL

-------------------------------------------------------------------------------------------------------------------------

                           EIS/PS QUICK LOOK EXTRACT PROGRAM  -  DIAGNOSTIC REPORT
                                                                                                            PAGE     1
     PROGRAM NAME: PRTQLEX (EP0270)
     REVISION LEVEL: 1-00
     LAST UPDATE #: P-1
     DATE INCORPORATED: FEBRUARY 1, 1980

     NUMBER OF EIS/PS MASTER FILE RECORDS READ:                   172
     NUMBER OF QUICK LOOK REPORT RECORDS WRITTEN:                  32
     NUMBER OF TURNAROUND DOCUMENT RECORDS WRITTEN:                 0
     NUMBER OF ANSWER FILE RECORDS WRITTEN:                         0
```

(Page 2 of 3)

Figure 6.5.2-i-continued. Output from Example 5 -- PRTQLED (EP0270) and PRTQLEX (EP0270)

```
.................................................................................................................
                                        EMISSIONS INVENTORY SYSTEM / POINT SOURCE SUBSYSTEM                   PAGE   1
.................................................................................................................
TEST 5 - STACK DATA FOR COUNTY 0040 IN STATE 34 AS OF 4/1/80
.................................................................................................................
PLNT NPID HGHT DIAM TEMP FLOW-RT VELOC PLUM PACS
.................................................................................................................
0001 01   0100 04.0 0345 0030159        0000
0001 02   0100 04.0 0345 0030159        0000
0001 03   0100 04.0 0345 0030159        0000
0001 04   0100 04.0 0450 0030159        0000
NUMBER OF RECORDS IN THIS PLNT IS       4
```

```
-------------------------------------------------------------------------------------------------------------------
```

```
.................................................................................................................
                                        EMISSIONS INVENTORY SYSTEM / POINT SOURCE SUBSYSTEM                   PAGE   1
.................................................................................................................
TEST 5 - STACK DATA FOR COUNTY 0040 IN STATE 34 AS OF 4/1/80
.................................................................................................................
PLNT NPID HGHT DIAM TEMP FLOW-RT VELOC PLUM PACS      BOILR
.................................................................................................................
0001 01   0100 04.0 0345 0030159        0000          00048
0001 02   0100 04.0 0345 0030159        0000          00048
0001 03   0100 04.0 0345 0030159        0000          00048
0001 04   0100 04.0 0450 0030159        0000          00021
                                                 0000000165

NUMBER OF RECORDS IN THIS PLNT IS       4
```

(Page 3 of 3)

Figure 6.5.2-i-continued. Output from Example 5 -- Report One and Report Two

```
.............................................................................................................................
                                    EIS/PS QUICK LOOK EDIT PROGRAM  -  DIAGNOSTIC REPORT                          PAGE   1
.............................................................................................................................
PROGRAM NAME: PRTQLED (EP0260)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980
.............................................................................................................................
TITLE   TEST 6 - TSP EMISSIONS FOR COUNTY 0040 AS OF 4/1/80
.............................................................................................................................

SELECTION CRITERIA

10   ICNT E 0040           AND
10   POLL E 11101

REPORT FORMATS

20 QL

REPORT SEQUENCE

30 SITE  CNTYX PLNTX
     STATE
     COUNTY                      PAGE BREAK/SUBTOTAL
     PLANT ID                    PAGE BREAK/SUBTOTAL

QUICK LOOK DATA ELEMENTS - REPORT ONE

40 X SITE  CNTY  PLNT  ESTIX
     STATE
     COUNTY
     PLANT ID
     EMISSIONS ESTIMATE          TOTAL

QUICK LOOK DATA ELEMENTS - REPORT TWO

41   SITE  CNTY  PLNT  NPID  ESTIX
     STATE
     COUNTY
     PLANT ID
     NEDS POINT ID
     EMISSIONS ESTIMATE          TOTAL
```

(Page 1 of 3)

Figure 6.5.2-j. Output from Example 6 -- PRTQLED (EP0260)

```
                        EIS/PS QUICK LOOK EXTRACT PROGRAM  -  DIAGNOSTIC REPORT                                  PAGE    1

PROGRAM NAME: PRTQLEX (EP0270)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF EIS/PS MASTER FILE RECORDS READ:            172
NUMBER OF QUICK LOOK REPORT RECORDS WRITTEN:           50
NUMBER OF TURNAROUND DOCUMENT RECORDS WRITTEN:          0
NUMBER OF ANSWER FILE RECORDS WRITTEN:                  0
```

```
-----------------------------------------------------------------------------------------------------------------------------

**************************************************************************************************************************
                                        EMISSIONS INVENTORY SYSTEM / POINT SOURCE SUBSYSTEM                  PAGE    3
**************************************************************************************************************************
TEST 6 - TSP EMISSIONS FOR COUNTY 0040 AS OF 4/1/80
**************************************************************************************************************************
STTE CNTY PLNT APID      EM-ESTI
**************************************************************************************************************************
18   0040 0005 01        0000125
18   0040 0005 02        0000004
18   0040 0005 03        0000003
18   0040 0005 04        0000003
18   0040 0005 05        0000000
18   0040 0005 06        0000000
18   0040 0005 07        0000000
                   0000000000135
NUMBER OF RECORDS IN THIS PLNT IS        7
```

(Page 2 of 3)

Figure 6.5.2-j-continued. Output from Example 6. PRTQLEX (EP0270) and Report Two

```
................................................................................................................
                                   EMISSIONS INVENTORY SYSTEM / POINT SOURCE SUBSYSTEM                PAGE  1
................................................................................................................
TEST 6 - TSP EMISSIONS FOR COUNTY 0040 AS OF 4/1/80
................................................................................................................
STTE CNTY PLNT       TSP-EST
................................................................................................................
     0040 0001 000000000000
NUMBER OF RECORDS IN THIS PLNT IS      1

     0040 0002 000000000000
NUMBER OF RECORDS IN THIS PLNT IS      1

     0040 0005 000000000133
NUMBER OF RECORDS IN THIS PLNT IS      7

     0040 0001 000000000012
NUMBER OF RECORDS IN THIS PLNT IS      4

     0040 0002 000000000000
NUMBER OF RECORDS IN THIS PLNT IS      2

     0040 0003 000000000001
NUMBER OF RECORDS IN THIS PLNT IS      1

     0040 0004 000000000000
NUMBER OF RECORDS IN THIS PLNT IS      1

     0040 0005 000000000046
NUMBER OF RECORDS IN THIS PLNT IS      3

     0040 0006 000000000000
NUMBER OF RECORDS IN THIS PLNT IS      3

     0040 0007 000000000000
NUMBER OF RECORDS IN THIS PLNT IS      1

     0040 0008 000000000000
NUMBER OF RECORDS IN THIS PLNT IS      1
     0040      000000000192
NUMBER OF RECORDS IN THIS CNTY IS     25

TOTAL NUMBER OF QUICK LOOK LINES EQUALS      25
```

(Page 3 of 3)

Figure 6.5.2-j-continued. Output from Example 6 -- Report One

```
.......................................................................................................
                              EIS/PS QUICK LOOK EDIT PROGRAM  -  DIAGNOSTIC REPORT              PAGE   1
.......................................................................................................
PROGRAM NAME: PRTQLED (EP0260)
REVISION LEVEL: 1-80
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980
.......................................................................................................
TITLE  TEST 7 - EXAMPLE OF TOTALS OPTION    4/1/80
.......................................................................................................


SELECTION CRITERIA

10   STTE F 06


REPORT FORMATS

20 QL AF


REPORT SEQUENCE

     DEFAULT REPORT SEQUENCE, SAME AS MASTER FILE ORDER

QUICK LOOK DATA ELEMENTS - REPORT ONE

40   STTE  CNTY  PLNT  SIID  PROPX BOILX SPAC
     STATE
     COUNTY
     PLANT ID
     SEGMENT 1 NEDS POINT ID
     PROPERTY AREA             TOTAL
     BOILER DESIGN CAPACITY    TOTAL
     SPACE HEAT %


QUICK LOOK DATA ELEMENTS - REPORT TWO

41   STTE  CNTY  PLNT  SIID  PROP  BOILX SPAC
     STATE
     COUNTY
     PLANT ID
     SEGMENT 1 NEDS POINT ID
     PROPERTY AREA
     BOILER DESIGN CAPACITY    TOTAL
     SPACE HEAT %
```

(Page 1 of 4)

Figure 6.5.2-k. Output from Example 7 -- PRTQLED (EP0260)

```
                         EIS/PS QUICK LOOK EXTRACT PROGRAM  -  DIAGNOSTIC REPORT                                  PAGE    1

PROGRAM NAME: PRTQLEX (EP0270)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF EIS/PS MASTER FILE RECORDS READ:                 172
NUMBER OF QUICK LOOK REPORT RECORDS WRITTEN:                16
NUMBER OF TURNAROUND DOCUMENT RECORDS WRITTEN:               0
NUMBER OF ANSWER FILE RECORDS WRITTEN:                      49
------------------------------------------------------------------------------------------------------------------------

.......................................................................................................................
                                      EMISSIONS INVENTORY SYSTEM / POINT SOURCE SUBSYSTEM                  PAGE    1
.......................................................................................................................
TEST 7 - EXAMPLE OF TOTALS OPTION     4/1/80
.......................................................................................................................
STTE CNTY PLNT STID        PR-AREA       BOILER HEAT
.......................................................................................................................
06    1980 0001 01          00001.9       00137 09.7
06    1980 0001 10          00001.9       00137 09.7
06    1980 0041 01          00001.9       00137 09.7
06    1980 0041 02          00001.9       00137 09.7
06    2004 AW41 01          00001.9       00137 09.7
06    2004 AW41 02          00001.9       00137 09.7
06    2004 AW41 10          00001.9       00137 09.7
06    2004 AW41 AB          00001.9       00137 09.7
                         00000000015.2 0000001096

TOTAL NUMBER OF QUICK LOOK LINES EQUALS       8
------------------------------------------------------------------------------------------------------------------------

.......................................................................................................................
                                      EMISSIONS INVENTORY SYSTEM / POINT SOURCE SUBSYSTEM                  PAGE    1
.......................................................................................................................
TEST 7 - EXAMPLE OF TOTALS OPTION     4/1/80
.......................................................................................................................
STTE CNTY PLNT STID PR-AREA       BOILER HEAT
.......................................................................................................................
06    1980 0001 01  00001.9       00137 09.7
06    1980 0001 10  00001.9       00137 09.7
06    1980 0041 01  00001.9       00137 09.7
06    1980 0041 02  00001.9       00137 09.7
06    2004 AW41 01  00001.9       00137 09.7
06    2004 AW41 02  00001.9       00137 09.7
06    2004 AW41 10  00001.9       00137 09.7
06    2004 AW41 AB  00001.9       00137 09.7
                              0000001096

TOTAL NUMBER OF QUICK LOOK LINES EQUALS       8
```

(Page 2 of 4)

Figure 6.5.2-k-continued. Output from Example 7 -- PRTQLEX(EP0270), Report One, and Report Two

```
                              EIS/PS MASTER FILE DETAILED REPORT                                            PAGE   1

        STATE COUNTY AQCR PLANT ID
         06    1980   055   0001

  DATE       SEGMENT    CONTROL  LOCAL                                                                    PRINCIPAL
YEAR DAY      TYPE      REGION   CONTROL   PLANT ID    CITY UTM ZONE OWNER     CONTACT        TELEPHONE    PRODUCT
 80  047       0          125       04    PL-5175      0012   12      P   FRANKE SMYTHE    5919544376   9ENGINES

                                                       NUMBER OF  PROPERTY
ESTABLISHMENT NAME AND ADDRESS               ZIP       EMPLOYEES    AREA     MAILING ADDRESS                         ZIP
SMYTHE ENGINE CO                                         0014     00001.9    RED OAKE, COLORADO

                                                          NEDS FLAG  PLANT FLAG  E I S   F L A G S
P7 PLANT COMMENT                                             P1          P7         1   2   3   4
PLANT OUT IN PRODUCTION 12/79 THRU /4/80                     A           A          A   A   A   A

  DATE    SEGMENT POINT   USER                    UTM COORDINATES    LATITUDE     LONGITUDE    ANNUAL THRUPUT   NORMAL OPERATING
YEAR DAY    TYPE    ID    POINT ID SIC  IPP HORIZONTAL VERTICAL DEG MIN SEC  DEG MIN SEC  DEC MAR JUN SEP  HR/D D/WK WK/YR
 80  047     1      01       011   1141 21    245.4     0955.5   71  21  21  051  51  52   02  03  03  01   10   5    47

BOILER   SPACE  S      T    A    C     K          D     A     T    A          COMP SCHED   COMP STATUS          CONTROL REGULATION
CAPACITY HEAT   HEIGHT DIAM TEMP FLOW RATE VELOCITY PLUME PNTS  COMP YEAR MONTH  YEAR MONTH DAY  ECAP REG 1 REG 2 REG 3
 00137   09.7   0090  01.0 0100  0000123    00150   0900          2   81    10    79   12    15   1     44    15    17

                                                         N E D S    F L A G S  POINT FLAG  E I S   F L A G S
P7 POINT COMMENT                                         P2  P3  P4  P5  PWCS      P7          11   12   14
POINT ADDED 12/14/79                                      A   A   A   A             A           A    A    A

NUMBER OF  POLLUTANT CONTROL  CONTROL EQUIP ESTM CNTL          E  M  I  S  S  I  O  N  S                 ESTM   TEST  EIS FLG
POLLUTANTS    ID      COST      PRI  SEC    EFFICIENCY ESTIMATE MEASURED ALLOWABLE POTENTIAL UNITS METHOD METHOD   13
    02        CO     00001.00   022  041       98.5     0000100  0000200  0000300                4     3      3      A
              TSP    00001.00   022  041       98.5     0000100  0000200  0000300                4     3      3      A

  DATE    SEGMENT POINT      SCC       SCC SEG   REC          FUEL -   MAX DESIGN  SULFUR    ASH     HEAT
YEAR DAY    TYPE   ID    I II III IV    NMN    NBR ID  UNITS PROCESS     RATE     CONTENT CONTENT CONTENT CONF SOURCE
 80  047     2     01    4 05 001 01     00    123 01    2   0003000   0004.000    5.78    02.3    00150   1    8

                                                         NEDS FLAG  SCC FLAG  E I S   F L A G S
P7 SCC.COMMENT                                              P6         P7       21  22  24  25
SCC LEFT COMMENT P7          SCC RIGHT P7 COMMENT           A          A        A   A   A   A

                                F F     NUMBER OF  POLLUTANT  EMISSION    ASH /  FACTOR EMISSIONS EIS FLAG
SOURCE DESCRIPTION            SOURCE   EMSN FCTR     ID        FACTOR     SULFUR  UNITS   APPORT      23
ENGINE                           8        04        NOX      000000.000            2                  A
                                                    CO       000000.000            1     0000000      A
                                                    22104    000000.230            2                  A
                                                    TSP      000000.000            1     0000000      A
```

(Page 3 of 4)

Figure 6.5.2-k-continued. Output from Example 7 - Detailed Report

```
                                  EIS/PS MASTER FILE DETAILED REPORT                                     PAGE   4

         STATE COUNTY AQCR PLANT ID
          06   1960   055   0001

  DATE      SEGMENT   CONTROL  LOCAL                                                                 PRINCIPAL
YEAR DAY     TYPE     REGION   CONTROL    PLANT ID    CITY UTM ZONE OWNER      CONTACT       TELEPHONE    PRODUCT
 80  047      0        123       04    PL-5175       0012    12     P  FRANKE SMYTHE   5919544376   9ENGINES

                                                     NUMBER OF  PROPERTY
ESTABLISHMENT NAME AND ADDRESS              ZIP     EMPLOYEES    AREA    MAILING ADDRESS                       ZIP
SYMTHE ENGINE CO                                      0014     00001.9   RED OAKE, COLORADO

                                                    NEDS FLAG  PLANT FLAG  E I S   F L A G S
P7 PLANT COMMENT                                        P1          P7        1   2   3   4
PLANT NOT IN PRODUCTION 12/79 THRU 04/80                A           A         A   A   A   A

  DATE    SEGMENT POINT    USER              UTM COORDINATES     LATITUDE     LONGITUDE    ANNUAL THRUPUT   NORMAL OPERATING
YEAR DAY   TYPE    ID    POINT ID SIC  IPP HORIZONTAL VERTICAL DEG MIN SEC  DEG MIN SEC  DEC MAR JUN SEP  HR/D D/WK WK/YR
 80  115    1      14      011   1141 21    245.4     0955.5   71  21  21   051  51  52   02  03  03  01   10   5    47

BOILER   SPACE   S     T     A    C     K        D      A     T    A      COMP SCHED   COMP STATUS       CONTROL REGULATION
CAPACITY HEAT   HEIGHT DIAM TEMP FLOW RATE VELOCITY PLUME PNTS  COMP YEAR MONTH  YEAR MONTH DAY  ECAP REG 1 REG 2 REG 3
 00137    09.7   0090  01.0 0100  0000123    00151   0900          2   81    10    79   12   15   1     44    15    17

                                                   N E D S    F L A G S  POINT FLAG  E I S   F L A G S
P7 POINT COMMENT                                   P2  P3  P4  P5  PMCS       P7        11   12   14
POINT ADDED 12/14/79                               A   A   A   A              A          A    A    A

NUMBER OF  POLLUTANT CONTROL  CONTROL EQUIP ESTM CNTL       E  M  I  S  S  I  O  N  S              ESTM   TEST  EIS FLG
POLLUTANTS    ID       COST      PRI  SEC    EFFICIENCY ESTIMATE MEASURED ALLOWABLE POTENTIAL UNITS METHOD METHOD  13
    02        CO     00001.00    022  041       98.5     0000100  0000200  0000300                4     3      3      A
              TSP    00001.00    022  041       98.5     0000100  0000200  0000300                4     3      3      A

  DATE    SEGMENT POINT     SCC       SCC SEG   REC          FUEL -   MAX DESIGN  SULFUR    ASH     HEAT
YEAR DAY   TYPE    ID    I II III IV    NBR   NBR ID  UNITS PROCESS     RATE     CONTENT CONTENT CONTENT CONF SOURCE
 80  115    2      14    4 03 001 01     00   123 01    2   0003000   0004.000    5.78     02.3    00150    1    8

                                                    NEDS FLAG  SCC FLAG  E I S   F L A G S
P7 SCC COMMENT                                          P6        P7       21  22  24  25
SCC LEFT COMMENT P7       SCC RIGHT P7 COMMENT          A         A        A   A   A   A

                               E F    NUMBER OF  POLLUTANT  EMISSION    ASH /  FACTOR EMISSIONS EIS FLAG
SOURCE DESCRIPTION            SOURCE  EMSN FCTR     ID       FACTOR     SULFUR  UNITS   APPORT     23
ENGINE                          8        04        TSP     000000.000             1     0000000     A
                                                   22104   000000.230             2                 A
                                                   NOX     000000.000             2                 A
                                                   CO      000000.000             1     0000000     A
```

(Page 4 of 4)

Figure 6.5.2-k-continued. Output from Example 7 -- Detailed Report

6.5.3 QUICK LOOK EXTRACT PROGRAM - PRTQLEX (EP0270)

6.5.3.1 Description

PRTQLEX (EP0270) extracts records from the EIS/PS master file using the selection criteria generated by PRTQLED (EP0260). The latter program generates the selection criteria from user-supplied quick look specification cards and passes it to PRTQLEX (EP0270) in a temporary file. See Section 6.5.2 for a further discussion of PRTQLED (EP0260).

PRTQLEX (EP0270) has the capability of producing a quick look file, a turnaround document file, or an answer file. The quick look file is produced when 'QL' is specified on the 20 card of the quick look specification cards. Master file records which meet the selection criteria are written to this file. Then, the file is passed to PRPQUIK (EP0280) which produces the quick look report.

The turnaround document file is produced when 'TA' is specified on the 20 card of the quick look specification cards. Master file records which meet the selection criteria are written to this file which is subsequently passed to PRPTURN (EP0290) to produce the turnaround document report.

The answer file is produced when 'AF' is specified on the 20 card of the quick look specification cards, and it can be produced in conjunction with either a quick look report or a turnaround document report. Master file records which meet the selection criteria are written to this file. The answer file is in master file format and sequence; therefore, it can be used by any EIS/PS program which accepts the master file. Records that are subordinate to records which meet the selection criteria will not be included in the answer file unless they independently qualify for selection. But, if subordinate records qualify, they will be accompanied by the records to which they are subordinate. Entire records will be written to the file unless a specific pollutant is requested in the specification cards. In this situation, the point and SCC segments which meet the selection criteria will contain only the repeating fields of the requested pollutant(s) along with the non-repeating field data.

The user may wish to execute PRPDUMP (EP0220) or PRPMSTR (EP0210) to produce a listing of the answer file for future reference.

6.5.3.2 File Formats

Input to PRTQLEX (EP0270) consists of the temporary extract control file passed from PRTQLED (EP0260) and the EIS/PS master file. See Figure 4.3.9-a for a description of the master file format.

Output from the program consists of a quick look file, a turnaround document file, and an answer file, depending upon the options coded on the 20 card of the quick look specification cards. Also, a diagnostic report is printed showing input and output counts. See Figure 6.5.3-a for a sample of the diagnostic report.

6.5.3.3 Options and Control Cards

There are no user-supplied options or control cards for this program. See Section 6.5.2.3 for a discussion of options and control cards for PRTQLED (EP0260).

6.5.3.4 Error Messages

There are no error messages.

6.5.3.5 Cataloged JCL - EPRTM40

6.5.3.5.1 JCL listing - PRTQLEX (EP0270) can be executed by any of the three procedures EPRTM40, EPRPM60, or EPRPM70. All three cataloged procedures also execute PRTQLED (EP0260). This section will discuss the cataloged procedure EPRTM40. Refer to Section 6.5.4.5 for a discussion of the procedure EPRPM60 and Section 6.5.5.5 for a disucssion of EPRPM70. See Figure 6.5.3-b for a listing of the cataloged procedure EPRTM40.

6.5.3.5.2 Cross-reference of DD names and files

Program Name: PRTQLED (EP0260)

DD Name	File Description	Input/Output
EPSINPT	Quick look retrieval specification cards	Input
EPSEXTR	Quick look extract control file (temporary)	Output
EPSCNTL	Quick look report control file (temporary)	Output
EPSDIAG	Diagnostic report	Output

Program Name: PRTQLEX (EP0270)

DD Name	File Description	Input/Output
EPSEXTR	Quick look extract control file (temporary)	Input
EPSMSTR	EIS/PS master file	Input
EPSQUIK	Quick look file (temporary)	Output

Program Name: PRTQLEX (EP0270) - continued

DD Name	File Description	Input/Output
EPSTURN	Turnaround document file (temporary)	Output
EPSANSR	Answer file	Output
EPSDIAG	Diagnostic report	Output

6.5.3.5.3 User-supplied JCL - To execute the cataloged procedure EPRTM40, the user must supply the quick look retrieval specification cards, the data set name of the EIS/PS master file, and the data set name of the answer file. See Section 6.5.2.3 for a discussion of the quick look retrieval specification cards. See Figure 6.5.3-c for a description of the procedure's substitutable parameters. The user should note that the default for the substitutable parameter 'DISP' will cause the answer file to be cataloged.

6.5.3.5.4 Sample run stream - The following run stream is from example 2 of Section 6.5.2.3. The data set names of the master file and answer file are, respectively, 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMSTR2' and 'CN.EPALMH.A087.CDHS.HQ.PNT.DATA.QLANSR1'.

```
// EXEC EPRTM40,
//      MSTRFIL=EPMSTR2,
//      ANSRFIL=QLANSR1
//EDIT.INPUT DD *
$$SELECT TEST 2 - PRODUCE AN ANSWER FILE WITH SO2 DATA    4/1/80
10   POLL E 43401          OR
10   MPID E 42401
20 AF
$$END
```

6.5.3.6 Warnings and Special Instructions

The user should insure that the quick look retrieval specification cards are coded properly in order to produce a meaningful answer file. See Section 6.5.2.3 for a discussion of these cards.

6.5.3.7 Cost Considerations

The estimates listed below are based on the execution of the run stream in Section 6.5.3.5.4 on an IBM 370/168.

Number of master file records read:	172
Number of quick look records written:	0
Number of turnaround document records written:	0
Number of answer file records written:	34
CPU time:	0.67 seconds
I/O time:	1.74 seconds
Total time:	2.41 seconds
Estimated cost:	$0.49

6.5.3.8 Related Programs and Procedures

The execution of PRTQLEX (EP0270) is entirely dependent upon the extract control file passed from the quick look edit program, PRTQLED (EP0260). See Section 6.5.2 for a discussion of PRTQLED (EP0260).

PRTQLEX (EP0270) can also be executed by the cataloged procedures EPRPM60 and EPRPM70. See Section 6.5.4.5 for a discussion of EPRPM60 and Section 6.5.5.5 for a discussion of EPRPM70.

When a listing of the answer file is desired, the user can execute PRPMSTR (EP0210) or PRPDUMP (EP0220). See Section 6.3.2 for a discussion of PRPMSTR (EP0210), the master file detailed report program. See Section 6.3.3 for a discussion of PRPDUMP (EP0220), the master file formatted dump program.

```
// EXEC EPRTM40,
//      MSTRFIL=EPMSTR2,
//      ANSRFIL=QLANSR1
//EDIT.INPUT DD *
$$SELECT TEST 2 - PRODUCE AN ANSWER FILE WITH SO2 DATA    4/1/80
10   POLL E 43401          OR
10   MPID E 42401
20 AF
$$END
```

6.5.3.6 Warnings and Special Instructions

The user should insure that the quick look retrieval specification cards are coded properly in order to produce a meaningful answer file. See Section 6.5.2.3 for a discussion of these cards.

6.5.3.7 Cost Considerations

The estimates listed below are based on the execution of the run stream in Section 6.5.3.5.4 on an IBM 370/168.

Number of master file records read:	172
Number of quick look records written:	0
Number of turnaround document records written:	0
Number of answer file records written:	34
CPU time:	0.67 seconds
I/O time:	1.74 seconds
Total time:	2.41 seconds
Estimated cost:	$0.49

6.5.3.8 Related Programs and Procedures

The execution of PRTQLEX (EP0270) is entirely dependent upon the extract control file passed from the quick look edit program, PRTQLED (EP0260). See Section 6.5.2 for a discussion of PRTQLED (EP0260).

PRTQLEX (EP0270) can also be executed by the cataloged procedures EPRPM60 and EPRPM70. See Section 6.5.4.5 for a discussion of EPRPM60 and Section 6.5.5.5 for a discussion of EPRPM70.

When a listing of the answer file is desired, the user can execute PRPMSTR (EP0210) or PRPDUMP (EP0220). See Section 6.3.2 for a discussion of PRPMSTR (EP0210), the master file detailed report program. See Section 6.3.3 for a discussion of PRPDUMP (EP0220), the master file formatted dump program.

```
                         EIS/P&R QUICK LOOK RETRIEVAL PROGRAM  -  DIAGNOSTIC REPORT                                  PAGE    1

PROGRAM NAME: PRTQLEX (EP0270)
REVISION LEVEL: 1-00
LAST UPDATE #: P-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF EIS/PS MASTER FILE RECORDS READ:             172
NUMBER OF QUICK LOOK REPORT RECORDS WRITTEN:             0
NUMBER OF TURNAROUND DOCUMENT RECORDS WRITTEN:           0
NUMBER OF ANSWER FILE RECORDS WRITTEN:                  34
```

Figure 6.5.3-a. Diagnostic Report

```
//* EPALMH/A087 HEDGEPTH, LLOYD M. (919) 541-5491
//*
//*   PROCEDURE NAME: EPRTM40
//*   REVISION LEVEL: 1-00
//*   LAST UPDATE #: P-1
//*   DATE INCORPORATED: FEBRUARY 1, 1980
//*
//*   THIS PROCEDURE ALLOWS THE USER TO GENERATE AN EIS/PS QUICK LOOK
//*   ANSWER FILE
//*
//*
//EPRTM40 PROC PROJECT='CN.EPALMH.A087.CDHS.HQ.PNT',
//             PROG1=PRTQLED,
//             PROG2=PRTQLEX,
//             REGION1=100K,
//             REGION2=100K,
//             TIME1='1,0',
//             TIME2='1,0',
//             MSTRFIL=EPMASTER,
//             ANSRFIL=EPQLANSR,
//             UNIT=3330,
//             TEMP=SYSDA,
//             SERIAL=CDHSPK,
//             DISP='NEW,CATLG,DELETE',
//             SPCUNIT=TRK,
//             PRIMARY=20,
//             SECNDRY=10,
//             WORKSPC='20,10',
//             OUT=A
//*
//EDIT    EXEC PGM=&PROG1,
//             REGION=&REGION1,
//             TIME=(&TIME1)
//*
//* EDIT QUICK LOOK CONTROL CARDS
//*
//STEPLIB  DD DSN=&PROJECT..LOAD,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//*
//* INPUT DATA SET - QUICK LOOK CONTROL CARDS
//*
//EPSINPT DD  DDNAME=INPUT,
//             DCB=BLKSIZE=80
//*
//* OUTPUT DATA SET - QUICK LOOK RETRIEVAL CONTROL TABLES
//*
//EPSEXTR DD  DSNAME=&&QLTABL,
//             UNIT=&TEMP,
//             DISP=(NEW,PASS),
//             SPACE=(&SPCUNIT,(&WORKSPC),RLSE)
//*
//* OUTPUT DATA SET - QUICK LOOK REPORT CONTROL FILE
//*
//EPSCNTL DD  DSNAME=&&QLRCNT,
//             UNIT=&TEMP,
```

(Page 1 of 3)

Figure 6.5.3-b. Cataloged Procedure EPRTM40

```
//             DISP=(NEW,PASS),                                         00005700
//             SPACE=(&SPCUNIT,(&WORKSPC),RLSE)                         00005800
//*                                                                     00005900
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00006000
//*                                                                     00006100
//EPSDIAG DD SYSOUT=&OUT                                                00006200
//*                                                                     00006300
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00006400
//*                                                                     00006500
//SYSOUT   DD SYSOUT=&OUT                                               00006600
//*                                                                     00006700
//SYSPRINT DD SYSOUT=&OUT                                               00006800
//*                                                                     00006900
//SYSDTERM DD SYSOUT=&OUT                                               00007000
//*                                                                     00007100
//SYSUDUMP DD SYSOUT=&OUT                                               00007200
//*                                                                     00007300
//SYSDBOUT DD SYSOUT=&OUT                                               00007400
//*                                                                     00007500
//RETRIEVE EXEC PGM=&PROG2,                                             00007600
//             REGION=&REGION2,                                         00007700
//             TIME=(&TIME2)                                            00007800
//*                                                                     00007900
//* RETRIEVE FROM THE MASTER FILE                                       00008000
//*                                                                     00008100
//STEPLIB  DD DSN=&PROJECT..LOAD,                                       00008200
//             VOLUME=(PRIVATE,RETAIN),                                 00008300
//             DISP=(SHR,PASS)                                          00008400
//*                                                                     00008500
//* INPUT DATA SET - QUICK LOOK RETRIEVAL CONTROL TABLES                00008600
//*                                                                     00008700
//EPSEXTR DD  DSN=&&QLTABL,                                             00008800
//             DISP=(SHR,PASS),                                         00008900
//             UNIT=&TEMP                                               00009000
//*                                                                     00009100
//* INPUT DATA SET - EIS/PS MASTER FILE                                 00009200
//*                                                                     00009300
//EPSMSTR DD  DSNAME=&PROJECT..DATA.&MSTRFIL,                           00009400
//             VOLUME=(PRIVATE,RETAIN),                                 00009500
//             DISP=(SHR,PASS)                                          00009600
//*                                                                     00009700
//* OUTPUT DATA SET - QUICK LOOK REPORT FILE                            00009800
//*                                                                     00009900
//EPSQUIK DD  DSN=&&QLRPTF,                                             00010000
//             UNIT=&TEMP,                                              00010100
//             DISP=(NEW,PASS),                                         00010200
//             SPACE=(&SPCUNIT,(&WORKSPC),RLSE)                         00010300
//*                                                                     00010400
//* OUTPUT DATA SET - QUICK LOOK TURN-AROUND REPORT FILE                00010500
//*                                                                     00010600
//EPSTURN DD  DSN=&&QLTURN,                                             00010700
//             UNIT=&TEMP,                                              00010800
//             DISP=(NEW,PASS),                                         00010900
//             SPACE=(&SPCUNIT,(&WORKSPC),RLSE)                         00011000
//*                                                                     00011100
//* OUTPUT DATA SET - QUICK LOOK ANSWER FILE                            00011200
```

(Page 2 of 3)

Figure 6.5.3-b - continued. Cataloged Procedure EPRTM40

```
//*
//EPSANSR DD  DSN=&PROJECT..DATA.&ANSRFIL,
//             UNIT=&UNIT,
//             VOL=(PRIVATE,RETAIN,SEP=&SERIAL),
//             DISP=(&DISP),
//             SPACE=(&SPCUNIT,(&PRIMARY,&SECNDRY),RLSE)
//*
//* OUTPUT DATA SET - DIAGNOSTIC REPORT
//*
//EPSDIAG DD SYSOUT=&OUT
//*
//* OUTPUT DATA SETS - SYSTEM OPERATION
//*
//SYSOUT   DD SYSOUT=&OUT
//*
//SYSPRINT DD SYSOUT=&OUT
//*
//SYSDTERM DD SYSOUT=&OUT
//*
//SYSUDUMP DD SYSOUT=&OUT
//*
//SYSDBOUT DD SYSOUT=&OUT
//*
```

(Page 3 of 3)

Figure 6.5.3-b - continued. Cataloged Procedure EPRTM40

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT. DATA.EPMASTER would be the full name of an EIS/PS master file)
PROG1	PRTQLED	Quick look edit program
PROG2	PRTQLEX	Quick look extract program
REGION1	100K	Region size allocated for the execution of PRTQLED
REGION2	100K	Region size allocated for the execution of PRTQLEX
TIME1	'1,0'	Time allocated for the execution of PRTQLED.
TIME2	'1,0'	Time allocated for the execution of PRTQLEX.
MSTRFIL	EPMASTER	Lowest-level index of EIS/PS master file
ANSRFIL	EPQLANSR	Lowest level index of quick look answer file

(Page 1 of 2)

Figure 6.5.3-c. Substitutable Parameters for EPRTM40

Parameter Name	Default Value	Description
UNIT	3330	Unit type to which the quick look answer file is to be written
TEMP	SYSDA	Unit type to which temporary data sets are to be written
SERIAL	CDHSPK	Volume serial number of volume to which the quick look answer file is to be written
DISP	'NEW,CATLG,DELETE'	Disposition of quick look answer file
SPCUNIT	TRK	Units in which space for all data sets is to be allocated
PRIMARY	20	Primary space allocation for the quick look answer file
SECNDRY	10	Secondary space allocation for the quick look answer file
WORKSPC	'20,10'	Space allocation for temporary data sets
OUT	A	SYSOUT class for all print files

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Figure 6.5.3-c - continued. Substitutable Parameters for EPRTM40

6.5.4 QUICK LOOK REPORT PROGRAM - PRPQUIK (EP0280)

6.5.4.1 Description

PRPQUIK (EP0280) produces the quick look report(s) according to the format specifications in the report control file which is passed from PRTQLED (EP0260). The data that appears in the quick look report(s) is taken from the quick look file which is passed from PRTQLEX (EP0270).

PRPQUIK (EP0280) is capable of producing a quick look report in three different formats simultaneously. This is accomplished by utilizing the 40, 41, and 42 cards of the user-supplied specification cards. (See Section 6.5.2.3 for further discussion of these cards). This feature enhances the flexibility of the quick look programs in that a user may obtain different quick look reports from the same selected master file records.

The COBOL SORT verb is utilized in this program to sort the quick look file records. IF the user submits a 30 card (sort sequence card) as input to PRTQLED (EP0260), the primary sort sequence will consist of the data fields coded from left to right on this card. The secondary sort sequence will be the master file sequence. If no 30 card is submitted, the master file sequence will be the default sort sequence. See Section 6.5.2.3 for further discussion of the 30 card.

The user should note that the installation's collating sequence may have an impact on the resulting quick look report(s) when a primary sort sequence is specified on the 30 card. However, since the master file record key is entirely numeric, it will not cause sequence errors in the report when used as the default sort sequence.

6.5.4.2 File Formats

Input to PRPQUIK (EP0280) consists of the quick look report file passed from PRTQLEX (EP0270) and the report control file passed from PRTQLED (EP0280). Both of these files are temporary files.

Output consists of the quick look report, which contains the program update messages on the page prior to page one of the actual report. See Figure 6.5.4-a for a sample of the quick look report.

6.5.4.3 Options and Control Cards

There are no user-supplied options or control cards for this program. See Section 6.5.2.3 for a discussion of options and control cards for PRTQLED (EP0260).

6.5.4.4 Error Messages

QLR001 ERROR: NO RECORDS IN REPORT CONTROL FILE

Meaning: The quick look edit program, PRTQLED (EP0260), encountered serious error(s) and deleted the retrieval, therefore no records were written to the report control file.

Action: Correct the error(s) in the quick look retrieval specification cards and resubmit the job.

QLR002 ERROR: NO RECORDS IN QUICK LOOK REPORT PRINT FILE

Meaning: The quick look edit program, PRTQLED (EP0260), encountered serious error(s) and deleted the retrieval, thereby causing the quick look retrieval program to retrieve no records; the logic of the 10 cards entered is such that no records from the master file satisfied the selection criteria; or QL was not entered on the 20 card.

Action: Correct the error(s) in the quick look retrieval specification cards, change the logic of the 10 cards, or enter QL on the 20 card in the quick look retrieval specification cards. Resubmit the job.

6.5.4.5 Cataloged JCL - EPRPM60

6.5.4.5.1 JCL Listing - PRPQUIK (EP0280) can be executed by the cataloged procedure EPRPM60. This procedure also executes the quick look edit program, PRTQLED (EP0260), and the quick look extract program, PRTQLEX (EP0270), prior to executing PRPQUIK (EP0280). See Figure 6.5.4-b for a listing of EPRPM60.

6.5.4.5.2 Cross-reference of DD names and files

Program Name: PRTQLED (EP0260)

DD Name	File Description	Input/Output
EPSINPT	Quick look retrieval specification cards	Input
EPSEXTR	Quick look extract control file (temporary)	Output
EPSCNTL	Quick look report control file (temporary)	Output
EPSDIAG	Diagnostic report	Output

Program Name: PRTQLEX (EP0270)

DD Name	File Description	Input/Output
EPSEXTR	Quick look extract control file (temporary)	Input
EPSMSTR	EIS/PS master file	Input
EPSQUIK	Quick look file (temporary)	Output
EPSTURN	Turnaround document file (temporary)	Output
EPSANSR	Answer file	Output
EPSDIAG	Diagnostic report	Output

Program Name: PRTQUIK (EP0280)

DD Name	File Description	Input/Output
EPSQUIK	Quick look file (temporary)	Input
EPSCNTL	Quick look report control file (temporary)	Input
EPSPRNT	Quick look report	Output

6.5.4.5.3 User-supplied JCL -To execute the cataloged procedure EPRPM60, the user must supply the quick look retrieval specification cards, the data set name of the EIS/PS master file, and the data set name of the quick look answer file if an answer file is requested. The user should note that the disposition of the answer file in this procedure will cause the file to be deleted at the end of the run. This disposition can be changed by overriding the substitutable parameter 'DISP' when executing EPRPM60. See Figure 6.5.4-c for a description of the procedure's substitutable parameters.

6.5.4.5.4 Sample run stream -The following run stream would produce a quick look report of all TSP emissions in state 06 and an answer file. Note that the disposition of the answer file is overridden in this example. The full data set names of the master file and answer file are their respective default values.

```
// EXEC EPRPM60,
//      DISP='NEW,CATLG,DELETE'
//EDIT.INPUT DD *
$$SELECT     TSP EMISSIONS IN STATE 06    4/1/80
10   1STT E 06              AND
10   POLL E 11101
20 QL AF
30 CNTYX
40   CNTY  PLNT  NPID  ALLOX ESTIX ECEF
$$END
/*
```

6.5.4.6 Warnings and Special Instructions

Since the COBOL SORT verb is used in this program, the user should be aware that collating sequences are not the same on all machines; therefore, care should be taken in coding the 30 card of the quick look retrieval specification cards. See Section 6.5.2.3 for a discussion of these cards.

The user should note the disposition of the answer file in the cataloged procedure EPRPM60 and override it according to the desired results.

The user should also insure that the quick look retrieval specification cards are coded properly in order to produce a meaningful report and answer file. See Section 6.5.2.3 for a discussion of these cards.

6.5.4.7 Cost Considerations

The estimates listed below are based on the execution of the run stream in Section 6.5.4.5.4 on an IBM 370/168 and pertain only to the quick look report program, PRPQUIK (EP0280).

Total number of quick look lines printed:	23 lines
CPU time:	1.03 seconds
I/O time:	1.13 seconds
Total time:	2.16 seconds
Estimated cost:	$.60

6.5.4.8 Related Programs and Procedures

The execution of PRPQUIK (EP0280) is entirely dependent upon the report control file passed from PRTQLED (EP0260) and the quick look report file passed from PRTQLEX (EP0270). See Section 6.5.2 for a discussion of PRTQLED (EP0260) and Section 6.5.3 for a discussion of PRTQLEX (EP0270).

```
............................................................................................................
                                    EMISSIONS INVENTORY SYSTEM / POINT SOURCE SUBSYSTEM                PAGE   1
............................................................................................................
TEST 4 - HYDROCARBON EMISSIONS FOR COUNTY 0040 AS OF 4/1/80
............................................................................................................
STTE CNTY PLNT PNID       EM-ESTI      EM-ALLO
............................................................................................................
18   0040 0001 01         0000000
18   0040 0002 01         0000000
18   0040 0005 01         0000000
18   0040 0005 02         0000000
18   0040 0005 03         0000000
18   0040 0005 04         0000000
18   0040 0005 05         0000000
34   0040 0006 01         0000000
34   0040 0001 01         0000000      9999999
34   0040 0001 02         0000000      9999999
34   0040 0001 03         0000000      9999999
34   0040 0001 04         0000000      9999999
34   0040 0003 01         0000000      9999999
34   0040 0004 01         0000000      9999999
34   0040 0005 02         0000000      9999999
34   0040 0005 03         0000000      9999999
34   0040 0006 02         0000000      9999999
34   0040 0006 03         0000000      9999999
34   0040 0007 01         0000000      9999999
34   0040 0008 01         0000000      9999999
18   0040 0005 07         0000001
18   0040 0005 06         0000002
34   0040 0005 01         0000002      9999999
                     000000000005 000129999987

TOTAL NUMBER OF QUICK LOOK LINES EQUALS     25
```

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Figure 6.5.4-a. Quick Look Report

```
//* EPALMH/A087 HEDGEPETH, LLOYD M. (919) 541-5491
//*
//*   PROCEDURE NAME: EPRPM60
//*   REVISION LEVEL: 1-00
//*   LAST UPDATE #: P-1
//*   DATE INCORPORATED: FEBRUARY 1, 1980
//*
//*   THIS PROCEDURE ALLOWS THE USER TO GENERATE AN EIS/PS QUICK
//*   LOOK REPORT
//*
//*
//EPRPM60 PROC PROJECT='CN.EPALMH.A087.CDHS.HQ.PNT',
//             PROG1=PRTQLED,
//             PROG2=PRTQLEX,
//             PROG3=PRPQUIK,
//             REGION1=100K,
//             REGION2=100K,
//             REGION3=100K,
//             TIME1='1,0',
//             TIME2='1,0',
//             TIME3='1,0',
//             MSTRFIL=EPMASTER,
//             ANSRFIL=EPQLANSR,
//             UNIT=3330,
//             TEMP=SYSDA,
//             SERIAL=CDHSPK,
//             DISP='NEW,PASS,DELETE',
//             SPCUNIT=TRK,
//             PRIMARY=20,
//             SECNDRY=10,
//             WORKSPC='20,10',
//             OUT=A
//*
//*
//EDIT    EXEC PGM=&PROG1,
//             REGION=&REGION1,
//             TIME=(&TIME1)
//*
//* EDIT QUICK LOOK CONTROL CARDS
//*
//STEPLIB  DD DSN=&PROJECT..LOAD,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//*
//* INPUT DATA SET - QUICK LOOK CONTROL CARDS
//*
//EPSINPT DD  DDNAME=INPUT,
//             DCB=BLKSIZE=80
//*
//* OUTPUT DATA SET - QUICK LOOK RETRIEVAL CONTROL TABLES
//*
//EPSEXTR DD  DSNAME=&&QLTABL,
//             UNIT=&TEMP,
//             DISP=(NEW,PASS),
//             SPACE=(&SPCUNIT,(&WORKSPC),RLSE)
//*
```

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Figure 6.5.4-b. Cataloged Procedure EPRPM60

```
//* OUTPUT DATA SET - QUICK LOOK REPORT CONTROL FILE
//*
//EPSCNTL DD  DSNAME=&&QLRCNT,
//             UNIT=&TEMP,
//             DISP=(NEW,PASS),
//             SPACE=(&SPCUNIT,(&WORKSPC),RLSE)
//*
//* OUTPUT DATA SET - DIAGNOSTIC REPORT
//*
//EPSDIAG DD SYSOUT=&OUT
//*
//* OUTPUT DATA SETS - SYSTEM OPERATION
//*
//SYSOUT   DD SYSOUT=&OUT
//*
//SYSPRINT DD SYSOUT=&OUT
//*
//SYSDTERM DD SYSOUT=&OUT
//*
//SYSUDUMP DD SYSOUT=&OUT
//*
//SYSDBOUT DD SYSOUT=&OUT
//*
//*
//RETRIEVE EXEC PGM=&PROG2,
//             REGION=&REGION2,
//             TIME=(&TIME2)
//*
//* RETRIEVE FROM THE MASTER FILE
//*
//STEPLIB DD  DSN=&PROJECT..LOAD,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//*
//* INPUT DATA SET - QUICK LOOK RETRIEVAL CONTROL TABLES
//*
//EPSEXTR DD  DSN=&&QLTABL,
//             DISP=(SHR,PASS),
//             UNIT=&TEMP
//*
//* INPUT DATA SET - EIS/PS MASTER FILE
//*
//EPSMSTR DD  DSNAME=&PROJECT..DATA.&MSTRFIL,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//*
//* OUTPUT DATA SET - QUICK LOOK REPORT FILE
//*
//EPSQUIK DD  DSN=&&QLRPTF,
//             UNIT=&TEMP,
//             DISP=(NEW,PASS),
//             SPACE=(&SPCUNIT,(&WORKSPC),RLSE)
//*
//* OUTPUT DATA SET - QUICK LOOK TURN-AROUND REPORT FILE
//*
//EPSTURN DD  DSN=&&QLTURN,
```

(Page 2 of 4)

Figure 6.5.4-b - continued. Cataloged Procedure EPRPM60

```
//             UNIT=&TEMP,                                              00011300
//             DISP=(NEW,PASS),                                         00011400
//             SPACE=(&SPCUNIT,(&WORKSPC),RLSE)                         00011500
//*                                                                     00011600
//* OUTPUT DATA SET - QUICK LOOK ANSWER FILE                            00011700
//*                                                                     00011800
//EPSANSW DD  DSN=&PROJECT..DATA.&ANSRFIL,                              00011900
//             UNIT=&UNIT,                                              00012000
//             VOL=(PRIVATE,RETAIN,SER=&SERIAL),                        00012100
//             DISP=(&DISP),                                            00012200
//             SPACE=(&SPCUNIT,(&PRIMARY,&SECNDRY),RLSE)                00012300
//*                                                                     00012400
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00012500
//*                                                                     00012600
//EPSDIAG DD SYSOUT=&OUT                                                00012700
//*                                                                     00012800
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00012900
//*                                                                     00013000
//SYSOUT   DD SYSOUT=&OUT                                               00013100
//*                                                                     00013200
//SYSPRINT DD SYSOUT=&OUT                                               00013300
//*                                                                     00013400
//SYSDTERM DD SYSOUT=&OUT                                               00013500
//*                                                                     00013600
//SYSUDUMP DD SYSOUT=&OUT                                               00013700
//*                                                                     00013800
//SYSDBOUT DD SYSOUT=&OUT                                               00013900
//*                                                                     00014000
//*                                                                     00014100
//REPORT EXEC PGM=&PROG3,                                               00014200
//             REGION=&REGION3,                                         00014300
//             TIME=(&TIME3)                                            00014400
//*                                                                     00014500
//* PRODUCE THE QUICK LOOK REPORT                                       00014600
//*                                                                     00014700
//STEPLIB  DD DSN=&PROJECT..LOAD,                                       00014800
//             VOLUME=(PRIVATE,RETAIN),                                 00014900
//             DISP=(SHR,PASS)                                          00015000
//*                                                                     00015100
//SORTLIB  DD DSN=SYS1.SORTLIB,                                         00015200
//             DISP=(SHR,PASS)                                          00015300
//*                                                                     00015400
//* INPUT DATA SET - QUICK LOOK REPORT FILE                             00015500
//*                                                                     00015600
//EPSQUIK DD  DSN=&&QLRPTF,                                             00015700
//             UNIT=&TEMP,                                              00015800
//             DISP=(SHR,PASS)                                          00015900
//*                                                                     00016000
//* INPUT DATA SET - QUICK LOOK REPORT CONTROL FILE                     00016100
//*                                                                     00016200
//EPSCNTL DD  DSN=&&QLRCNT,                                             00016300
//             UNIT=&TEMP,                                              00016400
//             DISP=(SHR,PASS)                                          00016500
//*                                                                     00016600
//* SORT DATA SETS                                                      00016700
//*                                                                     00016800
```

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Figure 6.5.4-b - continued. Cataloged Procedure EPRPM60

```
//SORTWK01 DD UNIT=&TEMP,                                                 00016900
//             SPACE=(&SPCUNIT,(&WORKSPC),,CONTIG)                        00017000
//*                                                                       00017100
//SORTWK02 DD UNIT=(&TEMP,SEP=SORTWK01),                                  00017200
//             SPACE=(&SPCUNIT,(&WORKSPC),,CONTIG)                        00017300
//*                                                                       00017400
//SORTWK03 DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                       00017500
//             SPACE=(&SPCUNIT,(&WORKSPC),,CONTIG)                        00017600
//*                                                                       00017700
//* OUTPUT DATA SET - QUICK LOOK REPORT                                   00017800
//*                                                                       00017900
//EPSPRNT DD SYSOUT=&OUT                                                  00018000
//*                                                                       00018100
//* OUTPUT DATA SETS - SYSTEM OPERATION                                   00018200
//*                                                                       00018300
//SYSOUT   DD SYSOUT=&OUT                                                 00018400
//*                                                                       00018500
//SYSPRINT DD SYSOUT=&OUT                                                 00018600
//*                                                                       00018700
//SYSOTERM DD SYSOUT=&OUT                                                 00018800
//*                                                                       00018900
//SYSUDUMP DD SYSOUT=&OUT                                                 00019000
//*                                                                       00019100
//SYSDBOUT DD SYSOUT=&OUT                                                 00019200
//*                                                                       00019300
//*                                                                       00019400
```

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Figure 6.5.4-b - continued. Cataloged Procedure EPRPM60

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA. EPMASTER would be the full name of an EIS/PS master file)
PROG1	PRTQLED	Quick look edit program
PROG2	PRTQLEX	Quick look extract program
PROG3	PRPQUIK	Quick look report program
REGION1	100K	Region size allocated for the execution of PRTQLED
REGION2	100K	Region size allocated for the execution of PRTQLEX
REGION3	100K	Region size allocated for the execution of PRPQUIK
TIME1	'1,0'	Time allocated for the execution of PRTQLED
TIME2	'1,0'	Time allocated for the execution of PRTQLEX
TIME3	'1,0'	Time allocated for the execution of PRPQUIK
MSTRFIL	EPMASTER	Lowest-level index of EIS/PS master file
ANSRFIL	EPQLANSR	Lowest-level index of EIS/PS answer file

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Figure 6.5.4-c. Substitutable Parameters for EPRPM60

Parameter Name	Default Value	Description
UNIT	3330	Unit type to which quick look answer file is to be written
TEMP	SYSDA	Unit type to which temporary data sets are to be written
SERIAL	CDHSPK	Volume serial number of volume to which quick look answer file is to be written
DISP	'NEW,PASS,DELETE'	Disposition of quick look answer file
SPCUNIT	TRK	Units in which space for all data sets is to be allocated
PRIMARY	20	Primary space allocation for quick look answer file
SECNDRY	10	Secondary space allocation for quick look answer file
WORKSPC	'20,10'	Primary and secondary space allocation for all data sets except the quick look answer file
OUT	A	SYSOUT class for all print files

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Figure 6.5.4-c - continued. Substitutable Parameters for EPRPM60

6.5.5 QUICK LOOK TURNAROUND DOCUMENT PROGRAM - PRPTURN (EP0290)

6.5.5.1 Description

PRPTURN (EP0290) supplies the user with a report from which EIS/PS master file transactions can be coded. The report contains a complete set of transactions for each record that appears in the quick look turnaround document file which is passed from PRTQLEX (EP0270). The quick look turnaround document file contains only those master file records which meet the criteria set forth on the user-supplied quick look retrieval specification cards (See Section 6.5.2.3 for further discussion of these cards). However, all data from each selected record will appear in the turnaround document regardless of whether or not repeating (pollutant-dependent) fields are included in the selection criteria.

The turnaround document displays the data from the selected records in card transaction format. Each field of data is printed below an abbreviation for the data field and the card column numbers in which the data would appear in a transaction. The card column numbers are printed vertically; therefore,

```
ST CNTY
00 0000
12 3456
06 1960
.. ....
```

indicates that the state code is 06 and is coded in card columns 01 and 02, while the county code is 1960 and is coded in card columns 03 through 06. Note that the number of periods (...) indicates the allowable field width for each data field. Space is left between the data and the periods below the data so that handwritten changes can be entered. These changes should be written carefully above each period.

The first 18 columns of each card (transaction) in a set is printed only once at the upper left of the page. This information must be punched on all transactions.

If the turnaround document is distributed for verification and updating, include a detailed set of coding instructions and a sample set of EIS/PS load sheets so that the headings and field content of the turnaround document are clear. Also, provide a clear set of keypunch instructions for the person performing that task.

The COBOL SORT verb is used in this program to sort the turnaround document file records prior to printing the report. The default sort order is the same as the master file sequence; however, the user may specify a primary sort order on the 30 card of the quick look retrieval specification cards.

6.5.5.2 File Formats

Input to PRPTURN (EP0290) consists of the quick look turnaround document file passed from PRTQLEX (EP0270) and the report control file passed from PRTQLED (EP0260). Both of these files are temporary and their generation is dependent upon the user-supplied quick look retrieval specification cards. See Section 6.5.2.3 for a discussion of these cards.

Output from the program consists of the quick look turnaround document. See Figure 6.5.5-a for a sample of this report.

6.5.5.3 Options and Control Cards

There are no user-supplied options or control cards for this program. See Section 6.5.2.3 for a discussion of options and control cards for PRTQLED (EP0260).

6.5.5.4 Error Messages

QLT001 ERROR: NO RECORDS IN REPORT CONTROL FILE

Meaning: The quick look edit program encountered serious error(s) and deleted the retrieval; therefore, no records were written to the report control file.

Action: Correct the error(s) in the quick look retrieval specification cards and resubmit the job.

QLT002 ERROR: NO RECORDS IN TURNAROUND PRINT FILE

Meaning: The quick look edit program encountered serious error(s) and deleted the retrieval, thereby causing the quick look extract program to retrieve no records; the logic of the 10 cards entered is such that no records from the master file satisfied the selection criteria; or TA was not entered on the 20 card.

Action: Correct the error(s) in the quick look retrieval specification cards, or change the logic of the 10 cards, or enter TA on the 20 card in the quick look retireval specification cards. Resubmit the job.

QLT003 DISASTER: REPORT CONTROL FILE CONTAINS INVALID RECORD

Meaning: The first record in the report control file is not the report title record. Program execution is terminated.

Action: Contact personnel at the National Air Data Branch for further assistance.

6.5.5.5 Cataloged JCL - EPRPM70

6.5.5.5.1 JCL Listing - PRPTURN (EP0290) can be executed by the cataloged procedure EPRPM70. This procedure also executes the quick look edit program, PRTQLED (EP0260), and the quick look extract program, PRTQLEX (EP0270). See Figure 6.5.5-b for a listing of EPRPM70.

6.5.5.5.2 Cross-reference of DD Names and Files

Program Name: PRTQLED (EP0260)

DD Name	File Description	Input/Output
EPSINPT	Quick look retrieval specification cards	Input
EPSEXTR	Quick look extract control file (temporary)	Output
EPSCNTL	Quick look report control file (temporary)	Output
EPSDIAG	Diagnostic report	Output

Program Name: PRTQLEX (EP0270)

DD Name	File Description	Input/Output
EPSEXTR	Quick look extract control file (temporary)	Input
EPSMSTR	EIS/PS master file	Input
EPSQUIK	Quick look file (temporary)	Output
EPSTURN	Turnaround document file (temporary)	Output
EPSANSR	Answer file	Output
EPSDIAG	Diagnostic report	Output

Program Name: PRPTURN (EP0290)

DD Name	File Description	Input/Output
SORTWK01	Sort work file	Internal
EPSTURN	Turnaround document file (temporary)	Input
EPSCNTL	Quick look report control file (temporary)	Input
EPSPRNT	Turnaround document	Output

6.5.5.5.3 User-supplied JCL - To execute the cataloged procedure EPRPM70, the user must supply the quick look retrieval specification cards, the data set name of the EIS/PS master file, and the data set name of the quick look answer file if an answer file is requested. The user should note that the disposition of the answer file in this procedure will cause the file to be deleted at the end of the run. This can be changed by overriding the substitutable parameter 'DISP' when executing EPRPM70. See Figure 6.5.5-c for a description of the procedure's substitutable parameters.

6.5.5.5.4 Sample run stream -The following run stream would produce a turnaround document and answer file for all records in county 1960 of state 06. The data set names of the EIS/PS master file and the answer file are their respective default values. The default disposition of the answer file is overriden to cause it to be saved and cataloged in the system catalog.

```
// EXEC EPRPM70,
//      DISP='NEW,CATLG,DELETE'
//EDIT.INPUT DD *
$$SELECT TA REPORT FOR COUNTY 1960 IN STATE 06 AS OF 4/1/80
10   STTE E 06            AND
10   CNTY E 1960
```

```
20 TA AF
30 SEGM
$$END
```

6.5.5.6 Warnings and Special Instructions

Since the COBOL SORT verb is used in this program, the user should be aware that collating sequences are not the same on all machines; therefore, care should be taken in coding the 30 card of the quick look retrieval specification cards. The user should also insure that these cards are coded properly to produce a meaningful report and answer file. See Section 6.5.2.3 for a discussion of these cards.

The user should note the disposition of the answer file in the cataloged procedure EPRPM70 and override it according to the desired results.

6.5.5.7 Cost Considerations

The estimates listed below are based on the execution of the run stream in Section 6.5.5.5.4 on an IBM 370/168 and pertain only to the quick look turnaround document program, PRPTURN (EP0290).

Number of turnaround document file records read:	12
Number of transactions printed:	50
CPU time:	1.00 seconds
I/O time:	2.23 seconds
Total time:	3.23 seconds
Estimated cost:	$0.47

6.5.5.8 Related Programs and Procedures

The execution of PRPTURN (EP0290) is entirely dependent upon the report control file passed from PRTQLED (EP0260) and the turnaround document file passed from PRTQLEX (EP0270). See Section 6.5.2 for a discussion of PRTQLED (EP0260) and Section 6.5.3 for a discussion of PRTQLEX (EP0270).

```
....................................................................................................................................
                                            EIS/PS QUICK LOOK TURNAROUND DOCUMENT                                             PAGE     1
....................................................................................................................................
TEST 3 - TURNAROUND DOCUMENT    4/1/80
....................................................................................................................................

ST CNTY AQCR PLANT YR DAY
00 0000  000  1111 11 111
12 3456  789  0123 45 678

06 1960  053  0001 80 047
                   .. ...


C=R LC USER PLNT ID CITY UTM OWN CNTACT PERSONEL TELEPHONE  PRNCPLPROD SEG CD ACT
122 22 222222333333 3333  44   4 444444455555555 5566666666 6677777777   7  7   8
901 23 456789012345 6789  01   2 345678901234567 8901234567 8901234567   8  9   0

123 04 PL-3175      0012  12   P FRANKE SMYTHE   5919544376 9ENGINES     0  1
... .. ............ ....  ..   . ............... .......... ..........   0  1   .


ESTABLISHMENT NAME AND ADDRESS                   NEMP PR AREA           SEG CD ACT
122222222222333333333344444444445555555555666666 6667 77777 7             7  7   8
901234567890123456789012345678901234567890123456 7890 12345 6             8  9   0

SYMTHE ENGINE CO                                 0014 00001.9             0  2
................................................ .... ..... .             0  2   .


ESTABLISHMENT MAILING ADDRESS                                           SEG CD ACT
122222222222333333333344444444445555555555666666                          7  7   8
901234567890123456789012345678901234567890123456                          8  9   0

RED OAKE, COLORADO                                                        0  3
................................................                          0  3   .


               PLANT SEGMENT COMMENT                                    SEG CD ACT
1222222222223333333333444444444455555555556666666666667                   7  7   8
9012345678901234567890123456789012345678901234567890                      8  9   0

PLANT NOT IN PRODUCTION 12/79 THRU /4/80                                  0  4
....................................................                      0  4   .
```

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Figure 6.5.5-a. Turnaround Document Report

```
*****************************************************************************************************************************
                                          EIS/PS QUICK LOOK TURNAROUND DOCUMENT                                   PAGE    2
*****************************************************************************************************************************
TEST 3 - TURNAROUND DOCUMENT    4/1/00
*****************************************************************************************************************************

ST CNTY AQCR PLANT YR DAY
00 0000  000  1111 11 111
12 3456  789  0123 45 678

06 1960  053  0001 80 047
                   ** ***

ID UID  SIC IPP HORIZ  VERT  LATITUDE LONGITUDE DF MM JA SN HR D WK CAPAC HEAT    SEG CD ACT
12 222 2222  22 333 3 3333 3 34 44 44 444 44 55 55 55 55 55 66 6 66 66666 77 7     7  7   8
90 123 4567  89 012 3 4567 8 90 12 34 567 89 01 23 45 67 89 01 2 34 56789 01 2     8  9   0

01 011 1141  21 245.4 0955.5 71 21 21 051 51 52 02 03 03 01 10 5 47 00137 09.7     1  1
** *** ****  ** *** * **** * ** ** ** *** ** ** ** ** ** ** ** * ** ***** ** *     1  1   .

ID HGHT DIAM TEMP FL RATE VELOC PLUME PT/STK COMP SY SM UY UM UD E REG1 REG2 REG3 SEG CD ACT
12 2222 22 2 2233 3333333 34444  4444   4455    5 55 55 55 56 66 6 6666 6677 7777   7  7   8
90 1234 56 7 8901 2345678 90123  4567   8901    2 34 56 78 90 12 3 4567 8901 2345   8  9   0

01 0090 01.0 0100 0000123 00150  0900           2 81 10 79 12 15 1   44   15   17   1  2
** **** ** * **** ******* *****  ****   ****    * ** ** ** ** ** * **** **** ****   1  2   .

ID POLUT CNTEQCST PCE SCE EFIC EMISEST MEAEMIS ALOEMIS UNIT EM TM                  SEG CD ACT
12 22222 22223 33 333 333 34 4 4444444 4555555 5555666    6  6  6                    7  7   8
90 12345 67890 12 345 678 90 1 2345678 9012345 6789012    3  4  5                    8  9   0

01 42101 00001.00 022 041 98.5 0000100 0000200 0000300    4  3  3                    1  3
** ***** ***** ** *** *** ** * ******* ******* *******    *  *  *                    1  3   .
01 11101 00001.00 022 041 98.5 0000100 0000200 0000300    4  3  3                    1  3
** ***** ***** ** *** *** ** * ******* ******* *******    *  *  *                    1  3   .

ID             POINT SEGMENT COMMENT                                                SEG CD ACT
12 2222222222333333333344444444445555555555666666666677 7                             7  7   8
90 1234567890123456789012345678901234567890123456789012                              8  9   0

01 POINT ADDED 12/14/79                                                              1  4
** ****************************************************                              1  4   .
```

(Page 2 of 4)

Figure 6.5.5-a. Turnaround Document Report

```
*****************************************************************************************************************************
                                             EIS/PS QUICK LOCK TURNAROUND DOCUMENT                                   PAGE    3
*****************************************************************************************************************************
TEST 3 - TURNAROUND DOCUMENT    4/1/80
*****************************************************************************************************************************

ST CNTY AQCR PLANT YR DAY
00 0000  000  1111 11 111
12 3456  789  0123 45 678

06 1960  053  0001 80 047
                   ** ***


ID SCC1 SCC2 SCC3 SCC4 SEQ  SEC  UN WASTE RT MAX RATE SULF  ASH  HEAT ORG SRC SEG CD ACT
12    2   22  222   22  23 33333  3  3334444 4444 445 5 55 55 5 55566   6   6   7  7   8
90    1   23  456   78  90 12345  6  7890123 4567 890 1 23 45 6 78901   2   3   8  9   0

01    4   03  001   01  00 12301  2  0003000 0004.000 5.78 02.3 00150   L   B   2  1
**    *   **  ***   **  ** *****  *  ******* **** *** * ** ** * *****   *   *   2  1   *


ID SCC1 SCC2 SCC3 SCC4 SEQ CON SC     SOURCE DESCRIPTION                         SEG CD ACT
12    2   22  222   22  23   3  3 3333333344444444445555555555                      7  7   8
90    1   23  456   78  90   1  2 3456789012345678901234567                         8  9   0

01    4   03  001   01  00   1  B ENGINE                                            2  2
**    *   **  ***   **  **   *  * *************************                         2  2   *


ID SCC1 SCC2 SCC3 SCC4 SEQ O S PLTID EMISS FCTR AS UN PLTID EMISS FCTR AS UN  SEG CD ACT
12    2   22  222   22  23 3 3 33333 334444 444  4  4 45555 555555 666  6  6    7  7   8
90    1   23  456   78  90 1 2 34567 890123 456  7  8 90123 456789 012  3  4    8  9   0

01    4   03  001   01  00 L B 42602 000000.000     2 42101 000000.000     1    2  3
**    *   **  ***   **  ** * * ***** ****** ***  *  * ***** ****** ***  *  *    2  3   *

01    4   03  001   01  00 L B 22104 000000.230     2 11101 000000.000     1    2  3
**    *   **  ***   **  ** * * ***** ****** ***  *  * ***** ****** ***  *  *    2  3   *


ID SCC1 SCC2 SCC3 SCC4 SEQ  SCC SEGMENT LEFT COMMENT                            SEG CD ACT
12    2   22  222   22  23 3333333333444444444455555555                          7  7   8
90    1   23  456   78  90 1234567890123456789012345 6                           8  9   0

01    4   03  001   01  00 SCC LEFT COMMENT P7                                   2  4
**    *   **  ***   **  ** **************************                            2  4   *


ID SCC1 SCC2 SCC3 SCC4 SEQ  SCC SEGMENT RIGHT COMMENT                           SEG CD ACT
12    2   22  222   22  23 3333333333444444444455555555                          7  7   8
90    1   23  456   78  90 12345678901234567890123456                            8  9   0

01    4   03  001   01  00 SCC RIGHT P7 COMMENT                                  2  5
**    *   **  ***   **  ** **************************                            2  5   *
```

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Figure 6.5.5-a. Turnaround Document Report

```
...............................................................................................................
                                              EIS/PS QUICK LOOK TURNAROUND DOCUMENT                    PAGE    5
...............................................................................................................
TEST 3 - TURNAROUND DOCUMENT    4/1/80
...............................................................................................................

ST CNTY AGCR PLANT YR DAY
00 0000  000  1111 11 111
12 3456  789  0123 45 678

06 1960  053  0001 80 047
                   .. ...

ID SEQ LINE LR                     COMMENT                         SEG CD ACT
12  22  222  2 222333333333344444444445555555555666666666677777777   7  7   8
90  12  345  6 789012345678901234567890123456789012345678901234567   8  9   0

01  02  021  L PLANT NOT FOLLOWING GUIDELINES AS SET DOWN 12/14/79   3  0
..  ..  ...  L ...................................................   3  0   .
01  02  021  R  WILL BE CITED 3/1/80                                 3  0
..  ..  ...  R ...................................................   3  0   .
```

Figure 6.5.5-a. Turnaround Document Report (Page 4 of 4)

```
//* EPALMH/A087 HEDGEPETH, LLOYD M. (919) 541-5491
//*
//*   PROCEDURE NAME: EPRPM70
//*   REVISION LEVEL: 1-00
//*   LAST UPDATE #: P-1
//*   DATE INCORPORATED: FEBRUARY 1, 1980
//*
//*   THIS PROCEDURE ALLOWS THE USER TO GENERATE AN EIS/PS QUICK
//*   LOOK TURN-AROUND DOCUMENT
//*
//*
//EPRPM70 PROC PROJECT='CN.EPALMH.A087.CDHS.HQ.PNT',
//             PROG1=PRTQLED,
//             PROG2=PRTQLEX,
//             PROG3=PRPTURN,
//             REGION1=100K,
//             REGION2=100K,
//             REGION3=100K,
//             TIME1='1,0',
//             TIME2='1,0',
//             TIME3='1,0',
//             MSTRFIL=EPMASTER,
//             ANSRFIL=EPQLANSR,
//             UNIT=3330,
//             TEMP=SYSDA,
//             SERIAL=CDHSPK,
//             DISP='NEW,PASS,DELETE',
//             SPCUNIT=TRK,
//             PRIMARY=20,
//             SECNDRY=10,
//             WORKSPC='20,10',
//             OUT=A
//*
//EDIT    EXEC PGM=&PROG1,
//             REGION=&REGION1,
//             TIME=(&TIME1)
//*
//* EDIT QUICK LOOK CONTROL CARDS
//*
//STEPLIB  DD DSN=&PROJECT..LOAD,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//*
//* INPUT DATA SET - QUICK LOOK CONTROL CARDS
//*
//EPSINPT DD  DDNAME=INPUT,
//             DCB=BLKSIZE=80
//*
//* OUTPUT DATA SET - QUICK LOOK RETRIEVAL CONTROL TABLES
//*
//EPSEXTR DD  DSNAME=&&QLTABL,
//             UNIT=&TEMP,
//             DISP=(NEW,PASS),
//             SPACE=(&SPCUNIT,(&WORKSPC),RLSE)
//*
//* OUTPUT DATA SET - QUICK LOOK REPORT CONTROL FILE
```

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Figure 6.5.5-b. Cataloged Procedure EPRPM70

```
//*                                                                     00005700
//EPSCNTL DD  DSNAME=&&QLRCNT,                                          00005800
//             UNIT=&TEMP,                                              00005900
//             DISP=(NEW,PASS),                                         00006000
//             SPACE=(&SPCUNIT,(&WORKSPC),RLSE)                         00006100
//*                                                                     00006200
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                                 00006300
//*                                                                     00006400
//EPSDIAG  DD SYSOUT=&OUT                                               00006500
//*                                                                     00006600
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00006700
//*                                                                     00006800
//SYSOUT   DD SYSOUT=&OUT                                               00006900
//*                                                                     00007000
//SYSPRINT DD SYSOUT=&OUT                                               00007100
//*                                                                     00007200
//SYSDTERM DD SYSOUT=&OUT                                               00007300
//*                                                                     00007400
//SYSUDUMP DD SYSOUT=&OUT                                               00007500
//*                                                                     00007600
//SYSDBOUT DD SYSOUT=&OUT                                               00007700
//*                                                                     00007800
//RETRIEVE EXEC PGM=&PROG2,                                             00007900
//             REGION=&REGION2,                                         00008000
//             TIME=(&TIME2)                                            00008100
//*                                                                     00008200
//* RETRIEVE FROM THE MASTER FILE                                       00008300
//*                                                                     00008400
//STEPLIB DD  DSN=&PROJECT..LOAD,                                       00008500
//             VOLUME=(PRIVATE,RETAIN),                                 00008600
//             DISP=(SHR,PASS)                                          00008700
//*                                                                     00008800
//* INPUT DATA SET - QUICK LOOK RETRIEVAL CONTROL TABLES                00008900
//*                                                                     00009000
//EPSEXTR DD  DSN=&&QLTABL,                                             00009100
//             DISP=(SHR,PASS),                                         00009200
//             UNIT=&TEMP                                               00009300
//*                                                                     00009400
//* INPUT DATA SET - EIS/PS MASTER FILE                                 00009500
//*                                                                     00009600
//EPSMSTR DD  DSNAME=&PROJECT..DATA.&MSTRFIL,                           00009700
//             VOLUME=(PRIVATE,RETAIN),                                 00009800
//             DISP=(SHR,PASS)                                          00009900
//*                                                                     00010000
//* OUTPUT DATA SET - QUICK LOOK REPORT FILE                            00010100
//*                                                                     00010200
//EPSQUIK DD  DSN=&&QLRPTF,                                             00010300
//             UNIT=&TEMP,                                              00010400
//             DISP=(NEW,PASS),                                         00010500
//             SPACE=(&SPCUNIT,(&WORKSPC),RLSE)                         00010600
//*                                                                     00010700
//* OUTPUT DATA SET - QUICK LOOK TURN-AROUND REPORT FILE                00010800
//*                                                                     00010900
//EPSTURN DD  DSN=&&QLTURN,                                             00011000
//             UNIT=&TEMP,                                              00011100
//             DISP=(NEW,PASS),                                         00011200
```

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Figure 6.5.5-b - continued. Cataloged Procedure EPRPM70

```
//             SPACE=(&SPCUNIT,(&WORKSPC),RLSE)                     00011300
//*                                                                 00011400
//* OUTPUT DATA SET - QUICK LOOK ANSWER FILE                        00011500
//*                                                                 00011600
//EPSANSR DD DSN=&PROJECT..DATA.&ANSRFIL,                           00011700
//             UNIT=&UNIT,                                          00011800
//             VOL=(PRIVATE,RETAIN,SER=&SERIAL),                    00011900
//             DISP=(&DISP),                                        00012000
//             SPACE=(&SPCUNIT,(&PRIMARY,&SECNDRY),RLSE)            00012100
//*                                                                 00012200
//* OUTPUT DATA SET - DIAGNOSTIC REPORT                              00012300
//*                                                                 00012400
//EPSDIAG DD SYSOUT=&OUT                                            00012500
//*                                                                 00012600
//* OUTPUT DATA SETS - SYSTEM OPERATION                             00012700
//*                                                                 00012800
//SYSOUT   DD SYSOUT=&OUT                                           00012900
//*                                                                 00013000
//SYSPRINT DD SYSOUT=&OUT                                           00013100
//*                                                                 00013200
//SYSDTERM DD SYSOUT=&OUT                                           00013300
//*                                                                 00013400
//SYSUDUMP DD SYSOUT=&OUT                                           00013500
//*                                                                 00013600
//SYSDBOUT DD SYSOUT=&OUT                                           00013700
//*                                                                 00013800
//*                                                                 00013900
//REPORT   EXEC PGM=&PROG3,                                         00014000
//              REGION=&REGION3,                                    00014100
//              TIME=(&TIME3)                                       00014200
//*                                                                 00014300
//* PRODUCE QUICK LOOK TURN-AROUND DOCUMENT                         00014400
//*                                                                 00014500
//STEPLIB   DD DSNAME=&PROJECT..LOAD,                               00014600
//              VOLUME=(PRIVATE,RETAIN),                            00014700
//              DISP=(SHR,PASS)                                     00014800
//*                                                                 00014900
//SORTLIB   DD DSNAME=SYS1.SORTLIB,                                 00015000
//              DISP=(SHR,PASS)                                     00015100
//*                                                                 00015200
//* INPUT DATA SET - QUICK LOOK REPORT CONTROL FILE                 00015300
//*                                                                 00015400
//EPSCNTL  DD  DSNAME=&&QLRCNT,                                     00015500
//              UNIT=&TEMP,                                         00015600
//              DISP=(SHR,PASS)                                     00015700
//*                                                                 00015800
//* INPUT DATA SET - QUICK LOOK TURN-AROUND REPORT                  00015900
//*                                                                 00016000
//EPSTURN  DD  DSNAME=&&QLTURN,                                     00016100
//              UNIT=&TEMP,                                         00016200
//              DISP=(SHR,PASS)                                     00016300
//*                                                                 00016400
//* SORT DATA SETS                                                  00016500
//*                                                                 00016600
//SORTWK01  DD UNIT=&TEMP,                                          00016700
//              SPACE=(&SPCUNIT,(&WORKSPC),,CONTIG)                 00016800
```

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Figure 6.5.5-b - continued. Cataloged Procedure EPRPM70

```
//*                                                                     00016900
//SORTWK02  DD UNIT=(&TEMP,SEP=SORTWK01),                               00017000
//             SPACE=(&SPCUNIT,(&WORKSPC),,CONTIG)                      00017100
//*                                                                     00017200
//SORTWK03  DD UNIT=(&TEMP,SEP=(SORTWK01,SORTWK02)),                    00017300
//             SPACE=(&SPCUNIT,(&WORKSPC),,CONTIG)                      00017400
//*                                                                     00017500
//* OUTPUT DATA SET - QUICK LOOK TURN-AROUND DOCUMENT                   00017600
//*                                                                     00017700
//EPSPRNT  DD SYSOUT=&OUT                                               00017800
//*                                                                     00017900
//* OUTPUT DATA SETS - SYSTEM OPERATION                                 00018000
//*                                                                     00018100
//SYSOUT    DD SYSOUT=&OUT                                              00018200
//*                                                                     00018300
//SYSPRINT  DD SYSOUT=&OUT                                              00018400
//*                                                                     00018500
//SYSDTERM  DD SYSOUT=&OUT                                              00018600
//*                                                                     00018700
//SYSUDUMP  DD SYSOUT=&OUT                                              00018800
//*                                                                     00018900
//SYSDBOUT  DD SYSOUT=&OUT                                              00019000
//*                                                                     00019100
```

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Figure 6.5.5-b - continued. Cataloged Procedure EPRPM70

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087. CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA. EPMASTER would be the full name of an EIS/PS master file)
PROG1	PRTQLED	Quick look edit program
PROG2	PRTQLEX	Quick look extract program
PROG3	PRPTURN	Quick look turnaround document program
REGION1	100K	Region size allocated for the execution of PRTQLED
REGION2	100K	Region size allocated for the execution of PRTQLEX
REGION3	100K	Region size allocated for the execution of PRPTURN
TIME1	'1,0'	Time allocated for the execution of PRTQLED
TIME2	'1,0'	Time allocated for the execution of PRTQLEX
TIME3	'1,0'	Time allocated for the execution of PRPTURN
MSTRFIL	EPMASTER	Lowest-level index of EIS/PS master file
ANSRFIL	EPQLANSR	Lowest-level index of quick look answer file
UNIT	3330	Unit type to which the quick look answer file is to be written

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Figure 6.5.5-c. Substitutable Parameters for EPRPM70

Parameter Name	Default Value	Description
TEMP	SYSDA	Unit type to which temporary data sets are to be written
SERIAL	CDHSPK	Volume serial number of volume to which the quick look answer file is to be written
DISP	'NEW,PASS,DELETE'	Disposition of quick look answer file
SPCUNIT	TRK	Units in which space for all data sets is to be allocated
PRIMARY	20	Primary space allocation for the quick look answer file
SECNDRY	10	Secondary space allocation for the quick look answer file
WORKSPC	'20,10'	Space allocation for all data sets except the quick look answer file
OUT	A	SYSOUT class for all print files

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Figure 6.5.5-c - continued. Substitutable Parameters for EPRPM70

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087.CDHS.HQ.PNT'	Highest-level index of data set names (e.g., CN.EPALMH.A087.CDHS.HQ.PNT.DATA.EPMASTER would be the full name of an EIS/PS master file)
PROG1	PRTQLED	Quick look edit program
PROG2	PRTQLEX	Quick look extract program
PROG3	PRPTURN	Quick look turnaround document program
REGION1	100K	Region size allocated for the execution of PRTQLED
REGION2	100K	Region size allocated for the execution of PRTQLEX
REGION3	100K	Region size allocated for the execution of PRPTURN
TIME1	'1,0'	Time allocated for the execution of PRTQLED
TIME2	'1,0'	Time allocated for the execution of PRTQLEX
TIME3	'1,0'	Time allocated for the execution of PRPTURN
MSTRFIL	EPMASTER	Lowest-level index of EIS/PS master file
ANSRFIL	EPQLANSR	Lowest-level index of quick look answer file
UNIT	3330	Unit type to which the quick look answer file is to be written

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Figure 6.5.5-c. Substitutable Parameters for EPRPM70

7.0 INTER-FUNCTIONAL PROCEDURES

7.1 INTRODUCTION

This section provides an example of a run stream from the EIS/PS baseline test run series in which more than one function is performed. In the brief discussion of the example, references are given to specific sections in the User's Guide for more detailed information on the programs and procedures. Also, a figure is provided which shows the run stream. The primary emphasis of this section is to demonstrate how various functions can be linked together in a single job to accomplish a desired result (by executing several EIS/PS procedures).

7.2 EXAMPLES

7.2.1 RETRIEVAL AND EMISSION PROJECTION

This retrieval is the same as that discussed in Example 2 of section 5.2.2.2. Records for county 0040 and SCC 40100101 are selected. Information on the retrieval can be found in Section 5.2. The retrieval procedure EPRTM30 is run.

The answer file retrieved is used as input to the emissions projection procedure EPRPM50. The SCC option is used for the emissions projection program PRPEPRJ (EP0250). The SCC 40100101 is projected by increasing thruput by 25%. Information on emissions projection can be found in Section 6.4.3.

Figure 7.2-a shows the run stream for this example. Note that TEMPRETR is the answer file retrieved from the master file EPMSTR2. The projection file is PROJFL2.

```
//ADHOC01A EXEC EPRTM30,
//              MSTRFIL=EPMSTR2,
//              ANSWRFL=TEMPRETR
//COMPILE.INPUT DD *
$$SELECT
COUNTY                      = '0040'                          AND
SCC                         = '40100101'
$$END
//ADHOC01B EXEC EPRPM50,
//              MSTRFIL=TEMPRETR
//              PROJFIL=PROJFL2
//PROJCT.OPTION DD *
40100101         025                                           2
```

Figure 7.2-a. Runstream for Example 7.2.1

8.0 JCL AND GENERAL TOPICS

8.1 IBM JCL

8.1.1 INTRODUCTION

This section discusses the IBM 360/370 OS JCL used in the baseline EIS/PS subsystem. Those users who have other types of hardware and operating systems will have to modify or replace this JCL and should consult their systems personnel for specific instructions.

There are three basic types of IBM JCL statements necessary to run the EIS/PS programs. These are the JOB, EXEC, and DD statements. All JCL statements follow a similar format: the first two columns of the card must contain slashes (//) to denote that the card is a JCL card; an optional name immediately follows the slashes and may be one to eight characters in length; the keyword (JOB, EXEC or DD) must be preceded and followed by at least one space. There are several fields of information specified in these statements, each field being separated from the preceding one by a comma. All of the information must be punched in columns 1-71. See Figure 8.1-a for an illustration of this format.

If a statement is too long to be punched on one card, the additional information can be punched on successive continuation cards. Each continuation card must contain slashes in columns 1 and 2 followed by at least one space. The information contained on the card must start between columns 4 through 16, inclusive. In addition, the last field on the preceding card must be followed by a comma.

There are three JCL statements that do not follow the general format. Information on these exceptions can be found in Section 8.1.5.

8.1.2 JOB CARD

A job is a group of JCL statements grouped together into a single run stream. The JOB card is the first of these statements, and it contains the accounting information and run parameters that the computer operating system must have to run the job. Each computer installation has its own standards for JOB card formats, but a sample format is shown in Figure 8.1-b. Some of the parameters mentioned here may not be allowed or may be specified differently at your installation. The user should consult his local computer systems personnel for details of the JOB card requirements at his installation. Each job card will generally contain an equal sign and a value for each keyword. Each field, except the last, must be followed by a comma. Figure 8.1-c gives a listing of frequently used information fields for JOB cards.

8.1.3 EXEC CARD

The EXEC card is used to specify the procedure or program to be executed. In EIS/PS, all JCL to execute specific programs is included in cataloged procedures (see Section 8.1.6). Several EXEC cards can be included in a given job; for example, to run both a retrieval and a detailed report of the answer file, two EXEC cards would be used, one for the retrieval procedure EPRTM30 and one for the detailed report procedure EPRPM20.

The cataloged procedures in EIS/PS contain substitutable parameters to indicate frequently changed information such as file names and storage information for new data sets. Values for these substitutable parameters are specified on the EXEC card. Information on the substitutable parameters for the cataloged procedures can be found in the program sections of this User's Guide.

8.1.4 DD CARD

The DD (Data Definition) card is used to define the data sets associated with a particular program's execution. The DD card provides information such as the data set name, the unit type (such as disk or tape), the volume on which the data set resides, and the disposition (is the data set old or new; should it be cataloged, kept, or deleted?). These DD cards are included in the cataloged procedures, with the most variable information (data set name, space allocation, disposition, etc.) specified by substitutable parameters. Fields that can be specified on the DD card are shown in Figure 8.1-d.

In some cases, the user will have to override one or more DD cards in a cataloged procedure. The cataloged procedures in EIS/PS contain deferred DD names for many data sets to eliminate the necessity for overrides. The DD cards defining option cards and transaction files for EIS/PS programs are examples of deferred DD names. For example, in the cataloged procedure EPRPM20 (see Section 6.3.2.5), which produces the master file detailed report, the DD card used to define the option card input to PRPMSTR (EP0210) is as follows:

```
//EPSOPTN    DD  DDNAME=OPTIONS,
//             DCB=BLKSIZE=80
```

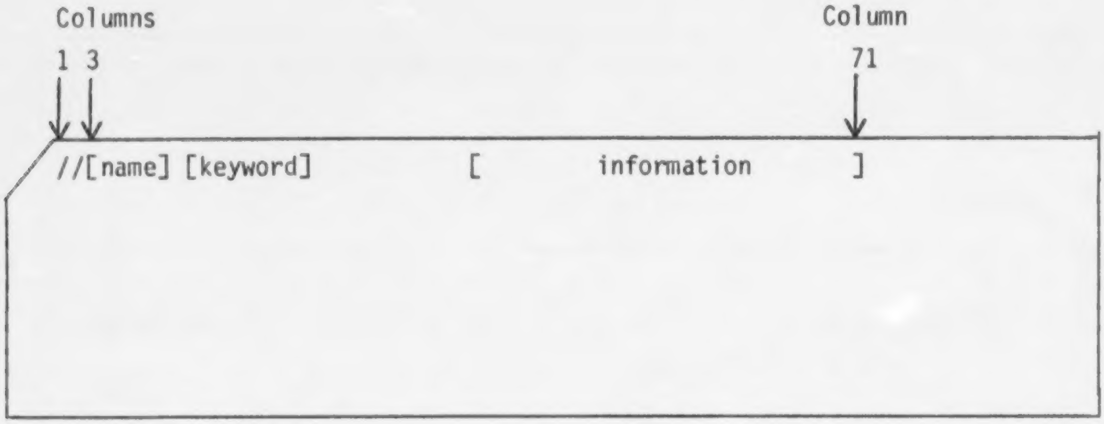
To run this procedure, a card must be entered into the run stream to further define this data set. The required card would be coded as follows:

```
//REPORT.OPTIONS DD *
```

Note that REPORT indicates the job step which executes PRPMSTR (EP0210), OPTIONS indicates which data set is being defined, and the * indicates that data (in this case, the option card) will immediately follow the DD card in the run stream.

section of this User's Guide which relates to that program. A list of the substitutable parameters associated with the procedure, a brief discussion, and sample job streams are also provided in that section.

A procedure can be executed directly from the EIS/PS JCL library if a procedure library (PROCLIB) control card immediately follows the JOB card in the run stream. However, some installations may require that the procedures be copied into a system procedure library. In this case, no PROCLIB statement is needed to execute a procedure. The systems personnel at a particular installation can explain what that installation requires. Please note that if the procedures are executed from a system procedure library, any updates to the EIS/PS procedures must be made in both the EIS/PS JCL library and the system library.



Name - one to eight characters

Keyword - DD, EXEC, JOB

Information - consists of several fields separated by commas

Figure 8.1-a. General Format of JCL Statement

```
//[job name] JOB  [accounting information],[name],[information]
```

Job name - name given to job by user. Must be one to eight characters in length and must begin in column 3

Accounting information - installation-dependent account number (consult the local systems personnel)

Name - name selected by user to identify run, 1 to 20 characters long

Information - see Figure 8.1-c

Figure 8.1-b. JOB Card Format

MSGLEVEL	Specifies whether or not all JCL cards should be listed.
PRTY	Specifies the job priority. These priorities are established by the installation; consult the local systems personnel for information.
CLASS	Specifies the job class to be used. Job classes determine the overall priority (and cost schedule) of the job. The user should consult the local systems personnel for information on classes used at his installation.
TIME	Specifies a time limit for the job. It can be given in minutes (e.g., TIME=3) or in minutes and seconds (e.g., TIME=(1,30)). If no value is specified, the installation's default value will be used. Consult the local systems personnel for information on the default value.

Figure 8.1-c. JOB Card Information Fields

DUMMY This parameter is specified for the input master file when running file maintenance procedures to create initial files. DUMMY signifies that the data set is not present.

UNIT Specifies the input/output unit. Disk units can be specified by DISK, 2314, 3330, etc., to denote the specific disk type used. Tapes can be specified by TAPE or 2400, etc. Consult the local systems personnel for specific information on the specifications.

DISP Specifies the data set disposition. There are three positional subparameters within the DISP parameter:
DISP=(current status, normal disposition, abnormal disposition).
One of three values can be specified for current status: NEW, OLD, or SHR. Their meanings are as follows:

NEW specifies that no data set with the specified name currently exists.

OLD designates an existing data set and specifies that the step will be given sole access to the data set.

SHR specifies an existing data set which can be shared with other jobs running at the same time.

The normal disposition is used if the step proceeds to normal system completion; the abnormal disposition is used if the step has an abnormal system termination. Note that most ABORT errors in

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Figure 8.1-d. DD Card Field Specifications

EIS/PS will cause the step to terminate prematurely, but will not cause a system ABORT, and therefore, the normal disposition is still in effect. The possible values for both dispositions are CATLG, KEEP, PASS, DELETE, and UNCAT. Their meanings are as follows:

CATLG, generally used for new permanent data sets, specifies that the data set will be kept and that an entry will be made in the system catalog for that data set. Cataloged data sets can be referred to in later jobs by name and disposition only.

KEEP is used to indicate that a new permanent data set is to be kept but that no entry will be made in the system catalog. Data sets written with a disposition of KEEP must be referenced by complete DD information.

PASS is used to pass the data set to subsequent job steps. The use of PASS saves time, since the system retains the data set location and volume information, and the volume containing the data set remains mounted. PASS can be used for both temporary and permanent data sets.

DELETE deletes the data set and removes it from the catalog, if applicable.

UNCATLG removes the data set from the catalog, but does not delete it.

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Figure 8.1-d - continued. DD Card Field Specifications

VOL	The volume parameter requests a specific volume, such as a tape reel or a disk pack. VOL must specify the volume serial number for a data set. It also can be used to specify that the volume is private, and that a mountable volume is to be retained. This is denoted by VOL=(PRIVATE,RETAIN,SER=XXXXXX), where XXXXXX is the six-character volume serial number. If only the volume serial number is to specified, VOL=SER=XXXXXX can be used.
LABEL	Provides label information for the data set. EIS/PS has been set up to specify all data sets as unlabeled. If this is not allowed at a particular installation, all programs in the system for that installation must be modified to reflect that the data sets are labeled. The user must consult NADB prior to making such a modification. Since tapes can contain more than one file, the file number is also specified in the LABEL parameter; i.e., LABEL=(file number, type). The value for type is NL for unlabeled data sets and SL for labeled data sets.
SPACE	The space parameter is used on direct access (disk) volumes to indicate the amount of space to be allocated. Space can be allocated by tracks (TRK) or cylinders (CYL). Both a primary and a secondary allocation can be specified; if the primary space is exceeded, up to 15 times the secondary allocation will be used. To conserve space, a release (RLSE) parameter can be coded. RLSE requests that only that space actually used for the data set be kept. As an example, to allocate ten primary and five secondary tracks with extra space released, the SPACE parameter would be coded as follows: SPACE=(TRK,(10,5),RLSE)

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Figure 8.1-d - continued. DD Card Field Specifications

SYSOUT	Routes a data set to a specific device, such as a printer or a card punch. Standard values are A for printer and B for card punch. Consult the local systems personnel for installation values used to specify special forms, etc.
DCB	Specifies the data control block (DCB) parameters, such as the record and block sizes and the record format. This information is not generally needed for EIS/PS. The subparameters generally used are RECFM, LRECL, and BLKSIZE. They are described as follows: RECFM is used to specify the record format. Values used in EIS/PS are V for variable-length records, F for fixed-length records, and B for blocked records. The EIS/PS master file has RECFM=VB; the emission factor file has RECFM=FB. LRECL indicates the record length of the file. If needed, this information can be found on the particular file's record layout in the User's Guide. BLKSIZE is used to indicate the block size (in bytes). The number of records per block can be found in the data division of each EIS/PS source program.

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Figure 8.1-d - continued. DD Card Field Specifications

8.2 UPDATES

8.2.1 INTRODUCTION

Changes are made to the EIS/PS programs and procedures as necessary to provide additional capabilities such as new user-oriented reports; to meet changing EPA requirements, such as changes to EPA standards; and to correct program "bugs." Some past examples of enhancements to EIS/P&R include adding the ability to add and delete machine processes and pollutants. Changes in the file maintenance program were necessitated by changes in the NEDS edit checking. Several program "bugs" which allowed for records to be lost have been corrected in the file maintenance program.

Whenever changes to the EIS/PS subsystem are necessary, an update will be issued by EPA to make that change. The purpose of this and the following sections is to provide information on installing these updates.

8.2.2 GENERAL UPDATE INFORMATION

8.2.2.1 Update Numbers

Each update is assigned an update number which serves as a means of identifying a particular program's status. The updates are numbered sequentially starting with 1; i.e., Update P-1 was the first update to EIS/PS.

Each program in the EIS/PS system provides an update message (see Figure 8.2-a) at the beginning of the diagnostic report. This update message includes the program's name, its revision level, the update number, and the date the update was incorporated in the EPA Baseline system. This information is necessary for troubleshooting since the update message includes the update status of the program being executed. Past problems have occured when users compiled new updates but failed to link edit them and also when users have not installed updates which corrected known problems. In both of these cases, the update message immediately reveals the problem. The user is reminded not to remove these update comments since doing so constitutes a modification to the system; EPA will not provide troubleshooting assistance for modified systems.

8.2.2.2 Update Package

If only a few changes are necessary, the update will be sent to users on cards, otherwise the update will be sent on a tape. Each installation should receive one full copy of the update (tape or cards). An abbreviated listing of the modified programs will be included in the package. This listing (see Figure 8.2-b) shows all modifications to the programs, plus the first and last page of the program source code.

The update package distributed by EPA also contains an update letter (see Figure 8.2-c), an update packing list (see Figure 8.2-d), and an update verification form (see Figure 8.2-e). Additional items may be included; they will be checked on the update packing list.

The update letter gives both detailed information on the modifications made in the update and instructions on installing the update. If the update is sent on tape, the letter will include a listing of the files on the tape with information on the number of records and programs contained in each file. See Figure 8.2-f for an example of a listing of a tape update. Each update letter contains a paragraph reminding users that NADB is not responsible for any modifications made to the system other than those authorized to meet a specific computer system problem.

The update packing list includes information on when the user's update was copied, the tape number (if applicable), and a checklist of items sent in the update package. If the update package does not correspond exactly with those items specified on the packing list, notify NADB for needed items.

The update Packing list also includes information on the hardware and software used by the installation. This information is necessary to provide each installation with a suitable update package. If there are any errors or omissions in this information, please notify NADB.

The update verification form is to be returned to NADB once the update has been installed. The form provides NADB with information on the update status of your installation. Such information is vital when problems occur in your EIS/PS system and NADB is contacted for troubleshooting assistance.

Additional personnel at your installation may be on the EIS/PS mailing list to receive letters-only copies of updates. These people will receive the update letter and any updates to the EIS/PS documentation, but will not receive the tape or cards to install the update. A checklist for installing the update is shown in Figure 8.2-g. Details on the installation are found in Section 8.2.3 through Section 8.2.5.

8.2.3 UPDATE INSTALLATION

The following sections discuss the procedures and systems utilities used to install an update. It is recommended that updates be installed as soon as possible. If the update has been sent on a magnetic tape, the tape should be returned to NADB promptly. If there is a delay in installing the update, copy it onto your own tape and return the tape sent from NADB. NADB should be contacted for troubleshooting assistance.

8.2.3.1 IBM Utility IEBUPDTE

The IBM utility IEBUPDTE allows for the addition, deletion, replacement, and modification of modules in partitioned data sets. EIS/PS uses partitioned data sets for both the source and the procedure libraries. The load library is also a partitioned data set, but changes are made to it by compiling and link editing modified programs. A sample listing of an IEBUPDTE deck is shown in Figure 8.2-h. This deck is provided with each EIS/PS update. The update letter lists any changes the user should make in the update deck prior to running it at his installation.

If the update has been sent on cards, all modifications to the source library are included to be run in one execution of IEBUPDTE; procedure modifications are included to be run in a separate execution. If the update is on a tape, each program is in a separate file on that tape. Each of the files can be input to a separate run of IEBUPDTE if time and page limits are small at your installation site; if such limits are not important, all of the files can be input to one run. The control cards are coded so that each modified program will be renumbered, beginning with 100 and incrementing by 100.

A listing of each program will be produced and this listing should be compared with the listing sent in the update package to insure that all modifications were made correctly and that the program has the correct number of lines. In addition, the condition code returned by the computer upon execution of IEBUPDTE should be 0 and a message should be printed indicating that the source module was altered. See Figure 8.2-i for an example of the condition codes and Figure 8.2-j for an example of the printed message.

If you have made modifications to the source programs that cause the line numbers to be different from the baseline version, any updates which change specific lines of code (as compared to replacing the entire program) must be examined. Using the abbreviated program listing (see Figure 8.2-b) and a listing of your source program, change the line numbers in the update deck to the line numbers of the appropriate lines of code in your source program. This will insure that the update will be correctly applied to your source program. For example, if 'MAIN-LOOP.' is line 1500 of the baseline version, but is 1502 in your source program, the update statement specifying line 1500 must be changed to specify line number 1502. However, if the update replaces the entire program, the replacement should be made first; any local modifications can then be made to a copy of the replacement program. Whenever local modifications are made, a copy of the baseline system must be kept. This copy will be useful in implementing future updates.

8.2.3.2 Run Stream for IEBUPDTE

The update deck contains all of the necessary JCL statements (excluding the job card) for executing IEBUPDTE. Upon receipt of the update, process the update deck through an interpreting keypunch. A listing of the update deck is included in the update package; the user should verify that the cards he receives are exactly as listed (see Figure 8.2-h for a sample listing).

The data set names (DSN=data set name) on the SYSUT1 and SYSUT2 DD cards must be changed to reflect the user's data set names if they are not identical. Thus, if the user's source library is 'F734.CDHS.PNT.SOURCE', the cards should be changed to the following:

```
//SYSUT1 DD DSN=F734.CDHS.PNT.SOURCE,DISP=OLD
//SYSUT2 DD DSN=F734.CDHS.PNT.SOURCE,DISP=OLD
```

If the user's source modules for the EIS/PS programs differ in name from the baseline (e.g., if the numeric names rather than the alphanumeric names are used), those names must be changed on all control statements. Thus, if the card

```
./ REPL NAME=PRPMSTR,LIST=ALL
```

is included in the update deck and the user's version of the master file detailed report program is stored under the name EP0210 rather than PRPMSTR, the card should be changed to

```
./ REPL NAME=EP0210,LIST=ALL.
```

A job card must be added prior to running the IEBUPDTE run stream. If several programs are to be modified in one run, specify sufficient time and page parameters on the job card.

8.2.3.3 Non-IEBUPDTE Updates

Some IBM installations use software packages such as ADR LIBRARIAN or PANVALET that have their own methods for updating. Installations which use these packages should consult their systems personnel for information on installing the EPA-distributed updates.

Non-IBM installations have different utilities to facilitate updating. For example, UNIVAC has an @ELT processor; CDC, the MODIFY and UPDATE utilities; and Honeywell, UTILITY. The user should consult his installation's systems personnel for information on these utilities.

An update package can be tailored to a user's individual needs if he provides NADB with information about his installation's exact specifications. The update packing list notes the specifications that have been reported to NADB; the user should inform NADB of any errors or omissions in this information.

8.2.4 COMPILING UPDATED PROGRAMS

Once the IEBUPDTE procedure has been successfully performed for each program, all modified programs should be compiled and link edited. EPCLC10

Total time:	22.4 seconds
Estimated cost:	$9.65

Compile and Link edit

CPU time:	22.7 seconds
I/O time:	1 minute 36.5 seconds
Total time:	1 minute 59.2 seconds
Estimated cost:	$25.43

8.2.7 WARNINGS AND SPECIAL INSTRUCTIONS

Each user is reminded not to make any modifications to EIS/PS other than those released or approved by NADB. Only the NADB baseline version of EIS/PS will be supported by NADB. All modified versions (unless authorized to meet a specific computer system problem) must be supported by the organization which performs the modification. NADB has begun a practice of inserting comments in the programs affected by updates. These comments will allow the user to inform NADB of the update status of a particular program in case of problems. The user is urged not to remove these comments since doing so constitutes a modification to the NADB version.

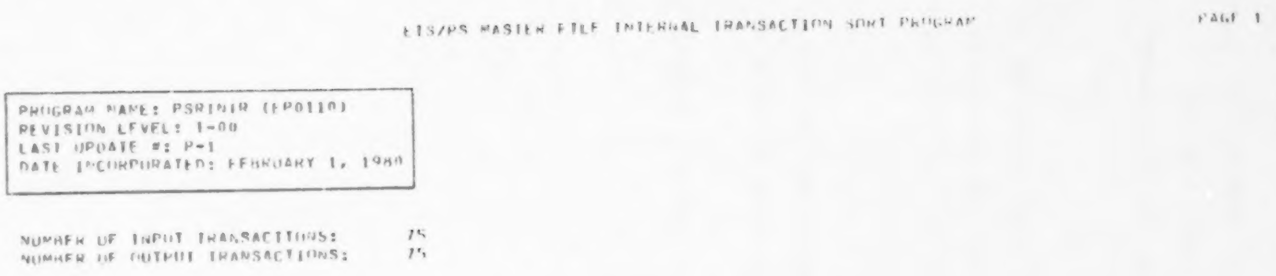
If the user wants to make modifications for his own purposes, he should make them to a copy of the baseline system. He should, however, always maintain the baseline system with no changes. This will give him an opportunity to test problems against the baseline system. If there is a problem and the problem is reproduced in the baseline, the user should report the problem to NADB. If the problem occurs in the modified version only, it is the user's responsibility to correct that problem.

Once the updated programs have been tested, they may be incorporated into the production system. If the update includes modifications to file structures, programs and instructions for making the file conversions will be sent with the update package.

The update verification form (see Figure 8.2-e) should be completed and sent to NADB as soon as the update has been installed and tested. Any changes in personnel should be included on this form. Also, all NADB tapes should be returned as soon as possible.

Once the update has been completed, all people who use the system should be informed of any effect the modifications will have on their work.

If there are any problems in installing the update, contact NADB for further help.

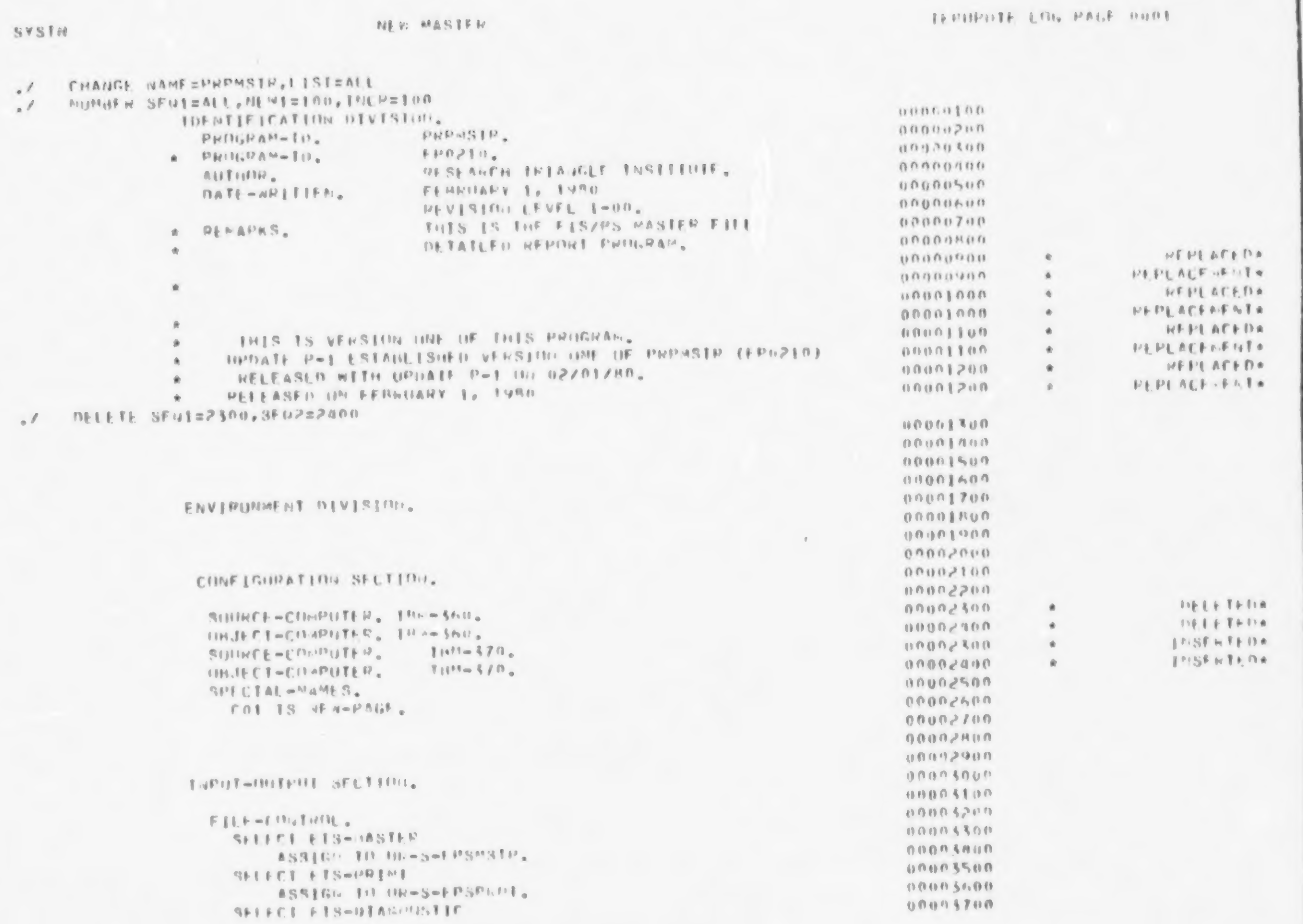


```
                      EIS/PS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM                    PAGE 1

 PROGRAM NAME: PSRINIR (EP0110)
 REVISION LEVEL: 1-00
 LAST UPDATE #: P-1
 DATE INCORPORATED: FEBRUARY 1, 1980

 NUMBER OF INPUT TRANSACTIONS:      75
 NUMBER OF OUTPUT TRANSACTIONS:     75
```

Figure 8.2-a. Sample Update Message



```
SYSIN                            NEW MASTER                                  IEBUPDTE LOG PAGE 0001

./    CHANGE NAME=PRPMSTR,LIST=ALL
./    NUMBER SEQ1=ALL,NEW1=100,INCR=100
               IDENTIFICATION DIVISION.                                        00000100
                 PROGRAM-ID.            PRPMSTR.                               00000200
              *  PROGRAM-ID.            EP0210.                                00000300
                 AUTHOR.                RESEARCH TRIANGLE INSTITUTE.           00000400
                 DATE-WRITTEN.          FEBRUARY 1, 1980                       00000500
                                        REVISION LEVEL 1-00.                   00000600
              *  REMARKS.               THIS IS THE EIS/PS MASTER FILE         00000700
                                        DETAILED REPORT PROGRAM.               00000800
              *                                                                00000900    *       REPLACED*
                                                                               00000900    *    REPLACEMENT*
              *                                                                00001000    *       REPLACED*
                                                                               00001000    *    REPLACEMENT*
              *                                                                00001100    *       REPLACED*
              *     THIS IS VERSION ONE OF THIS PROGRAM.                       00001100    *    REPLACEMENT*
              *    UPDATE P-1 ESTABLISHED VERSION ONE OF PRPMSTR (EP0210)      00001200    *       REPLACED*
              *     RELEASED WITH UPDATE P-1 ON 02/01/80.                      00001200    *    REPLACEMENT*
              *    RELEASED ON FEBRUARY 1, 1980
./    DELETE SEQ1=2300,SEQ2=2400
                                                                               00001300
                                                                               00001400
                                                                               00001500
                                                                               00001600
                                                                               00001700
               ENVIRONMENT DIVISION.                                           00001800
                                                                               00001900
                                                                               00002000
                CONFIGURATION SECTION.                                         00002100
                                                                               00002200
                 SOURCE-COMPUTER. IBM-360.                                     00002300    *        DELETED*
                 OBJECT-COMPUTER. IBM-360.                                     00002400    *        DELETED*
                 SOURCE-COMPUTER.     IBM-370.                                 00002300    *       INSERTED*
                 OBJECT-COMPUTER.     IBM-370.                                 00002400    *       INSERTED*
                 SPECIAL-NAMES.                                                00002500
                   C01 IS NEW-PAGE.                                            00002600
                                                                               00002700
                                                                               00002800
                                                                               00002900
               INPUT-OUTPUT SECTION.                                           00003000
                                                                               00003100
                 FILE-CONTROL.                                                 00003200
                   SELECT EIS-MASTER                                           00003300
                       ASSIGN TO UR-S-EPSMSTR.                                 00003400
                   SELECT EIS-PRINT                                            00003500
                       ASSIGN TO UR-S-EPSPRNT.                                 00003600
                   SELECT EIS-DIAGNOSTIC                                       00003700
```

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Figure 8.2-b. IEBUPDTE Output - Program Listing

```
SYSIN                     NEW MASTER                                    IEBUPDTE LOG PAGE 0029

      MOVE MSTR-CNTL-EQUIP-COST-R (LINE-SUB) TO P-R-COST              00144700
    ELSE                                                              00144800
      MOVE MSTR-CNTL-EQUIP-COST (LINE-SUB) TO P-COST.                 00144900
    MOVE MSTR-PRIMARY (LINE-SUB) TO P-PRI-CNTL.                       00145000
    MOVE MSTR-SECONDARY (LINE-SUB) TO P-SEC-CNTL.                     00145100
    IF MSTR-EST-CNTL-EFF-R (LINE-SUB) IS NOT NUMERIC                  00145200
      MOVE MSTR-EST-CNTL-EFF-R (LINE-SUB) TO P-R-CNTL                 00145300
    ELSE                                                              00145400
      MOVE MSTR-EST-CONTROL-EFF (LINE-SUB) TO P-CNTL.                 00145500
    MOVE MSTR-ESTIMATES (LINE-SUB) TO P-ESTIMATE.                     00145600
    MOVE MSTR-ACTUAL (LINE-SUB) TO P-MEASURED.                        00145700
    MOVE MSTR-ALLOWABLE (LINE-SUB) TO P-ALLOWABLE.                    00145800
    MOVE MSTR-POTENTIAL (LINE-SUB) TO P-POTENTIAL.                    00145900
    MOVE MSTR-EMISSION-UNITS (LINE-SUB) TO P-UNITS.                   00146000
    MOVE MSTR-ESTIMATION-METHOD (LINE-SUB) TO P-EST-METHOD.           00146100
    MOVE MSTR-TEST-METHOD (LINE-SUB) TO P-TEST-METHOD.                00146200
    MOVE MSTR-EIS-13-FLAG (LINE-SUB) TO P-EIS-13-FLAG.                00146300
    MOVE DETAIL-06 TO OUT-LINE.                                       00146400
    WRITE PRINT-LINE                                                  00146500
      AFTER ADVANCING ONE LINES.                                      00146600
    ADD BINARY-ONE TO LINE-NUMBER.                                    00146700
    MOVE SPACE TO P-POLLUTANTS.                                       00146800
  EMISSIONS-END.                                                      00146900
    EXIT.                                                             00147000
                                                                      00147100
                                                                      00147200
                                                                      00147300
  SEARCH-POLL-TRAN-TBL.                                               00147400
    IF HOLD-POLL-PRINT = POLL-IDENT-NBR (POLL-IDENT-SUB)              00147500
      MOVE  POLL-IDENT-NAME (POLL-IDENT-SUB) TO HOLD-POLL-PRINT       00147600
      MOVE ONE TO POLL-IDENT-FOUND-SW.                                00147700
  SEARCH-POLL-TRAN-TBL-END.                                           00147800
    EXIT.                                                             00147900
                                                                      00148000
  WRAP-UP.                                                            00148100
    MOVE RECORD-COUNT-0 TO NBR-OF-0.                                  00148200
    MOVE END-LINE-1 TO DIAG-LINE.                                     00148300
    WRITE DIAGNOSTIC-LINE AFTER ADVANCING BINARY-4 LINES.             00148400
    MOVE RECORD-COUNT-1 TO NBR-OF-1.                                  00148500
    MOVE END-LINE-2 TO DIAG-LINE.                                     00148600
    WRITE DIAGNOSTIC-LINE AFTER ADVANCING BINARY-1 LINES.             00148700
    MOVE RECORD-COUNT-2 TO NBR-OF-2.                                  00148800
    MOVE END-LINE-3 TO DIAG-LINE.                                     00148900
    WRITE DIAGNOSTIC-LINE AFTER ADVANCING BINARY-1 LINES.             00149000
    MOVE RECORD-COUNT-3 TO NBR-OF-3.                                  00149100
    MOVE END-LINE-4 TO DIAG-LINE.                                     00149200
    WRITE DIAGNOSTIC-LINE AFTER ADVANCING BINARY-1 LINES.             00149300
    CLOSE   EIS-MASTER                                                00149400
            EIS-PRINT                                                 00149500
            EIS-DIAGNOSTIC.                                           00149600
  WRAP-UP-END.                                                        00149700
    EXIT.                                                             00149800
```

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Figure 8.2-b. IEBUPDTE Output - Program Listing

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE:

SUBJECT: EIS/P&R Update 27

FROM: Lloyd Hedgepeth, Environmental Engineer

TO: EIS/P&R Users

Enclosed is the package for Update 27 to the EIS/P&R system. Please note that the full update package is sent to only one person at each installation, but copies of this cover memorandum are sent to a number of people who need to be informed of program and documentation updates. The Update Packing List shows what your package contains. If the hardware or software information on the form is not correct for your installation, please notify me. This information will be used to provide you with an update package most suited to the needs of your installation.

This update consists of four new programs, three new cataloged procedures, and revised versions of three existing programs. The new programs and cataloged procedures comprise the EIS/P&R Quick look package. The Quick Look package enhances the users' retrieval and report capability, and provides a turnaround document for the master file. The three revised programs affect the processing of the measured and estimated emissions fields, and correct problems in the file maintenance progrm. See Attahcment I for information on all modifications made by this update.

Update 27 is released on tape recorded at 1600 bpi with a record size of 80 bytes and a blocking factor of 50 (4000 bytes per block). The tape contains ten sequential data sets. The first three data sets contain revised versions of existing programs. The next four data sets contain the new programs. The last three data sets contain the three new cataloged procedures. See Attachment II for a list of the contents of these files.

For users with standard IBM utilities, an update deck is enclosed, along with a listing of the deck. This deck may be used to execute the IBM utility IEBUPDTE to update your source and JCL libraries. This deck should be tailored to your particular

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Figure 8.2-c. Update Letter

installation. For example, it assumes that the source and JCL libraries are named CN.EPALMH.A087.CDHS.HQ.PNR.SOURCE and CN.EPALMH.A087.CDHS.HQ.PNR.JCL, respectively. You should replace these names with the correct data set names for your installation. Users who use standard IBM utilities and receive the update deck, also receive an update tape in which appropriate IEBUPDTE control cards are included in each data set.

For users who do not use standard IBM utilites, no update deck is enclosed and the update tape contains no IEBUPDTE control cards. These users should use their own utilities to udpate their source and JCL libraries.

You are reminded not to make program modifications to EIS/P&R other than those released or approved by NADB. Only the NADB version of EIS/P&R will be supported by NADB. All modified versions (unless authorized to meet a specified computer system problem) must be supported by the organization whih performs the modifications.

NADB inserts update status comments in the programs affected by udpates. These comments are printed each time the program is run and allow you to inform NADB of the update status of a particular program should you have problems. You are urged not to remove these comments as removal of any comment is considered a modification to the NADB version.

If you wish to make modifications for your own purposes, you should make them to a copy of the baseline system. You should, however, maintain the baseline system incorporating only those changes distributed by NADB. This will give you an opportunity only those changes distributed by NADB. This will give you an opportunity to test problems against the baseline. If you have a problem, and the problem is reproduced in the baseline, please report the problem to NADB. If the problem occurs in the modified version only, it is your responsibility to correct the problem.

When you have installed the update in your system, please complete all items on the enclosed Update Verification Form and return it to me.

If you need further assistance or additional information, please contact Mr. Lloyd Hedgepeth at (919) 541-5491 or Mr. Larry McMaster at (919) 541-6821.

Enclosures

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Figure 8.2-c. Update Letter

Attachment I

Improvements Incorporated in Update 27 to EIS/P&R

1. CXNEDSCV, the NEDS point source to EIS/P&R conversion program, modified, so that for pollutants with estimation method of 1 (measured), the NEDS emission estimate field will be placed in the measured emissions field on the EIS/P&R 13 transaction. For all other estimation methods, the NEDS emission estimate will be placed in the estimated emissions field on the EIS/P&R 13 transaction.

2. NXNEDSCV the NEDS point source output program, was modified to allow the measured emissions field from the EIS/P&R master file to be used for the NEDS emissions estimate field for NEDS pollutants with an estimation method of 1. For all other estimation methods, the estimated emissions field from the EIS/P&R master file will be used for the NEDS emission estimate field.

3. FXFILMNT, the file maintenance program, was modified to accomplish the following:

   A problem of allowing duplicate pollutants for a point or was corrected. If an add transaction contains a pollutant which already exists on the master file, then the entire set of transactions (i.e., either a set of 11, 12, 13 transaction or 21, 22, 23 transactions) will be rejected and an error message produced.

   A problem of rejecting 30 add transactions when segment 1 or 2 transactions were run for the same point was corrected.

   The estimated emissions field need not be nonblank for an estimation method of 1 on a 13 transaction. This modification is coordinated with changes in CXNEDSCV and NXNEDSCV related to estimation method 1 (See number 1 and 2 above).

4. The EIS/P&R Quick Look Package is released. This package consists of four programs: the Quick Look Edit program, QXQLEDIT; the Quick Look Retrieval program, QXQLRETR; the Quick Look Report program, QXQLREPT; and the Quick Look Turnaround Document program, QXQLTURN. Three cataloged procedures are also released to execute these programs: PNRQLRTR, PNRQLRPT, and PNRQLTRN. The quick look package enables the user to generate reports in user-defined format. Selected records may be retrieved from the master file for inclusion in these reports. The quick look package also includes the capability to produce a turnaround document for user-selected master file records. The quick look package is documented in Addendum 3 to the EIS/P&R User's Guide. This addendum is included in this update.

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Figure 8.2-c. Update Letter

Attachment II

Contents of the EIS/P&R Update 27 Release Tape

File	Contents
1	CXNEDSCV, the NEDS point source to EIS/P&R conversion program
2	NXNEDSCV, the NEDS point source output program
3	FXFILMNT, the file maintenance program
4	QXQLEDIT, the quick look edit program
5	QXQLRETR, the quick look retrieval program
6	QXQLREPT, the quick look report program
7	QXQLTURN, the quick look turnaround document program
8	PNRQLRTR, the cataloged procedure to execute QXQLEDIT and QXQLRETR
9	PNRQLRPT, the cataloged procedure to execute QXQLEDIT, QXQLRETR, and QXQLREPT
10	PNRQLTRN, the cataloged procedure to execute QXQLEDIT, QXQLRETR, and QXQLTURN

(Page 4 of 4)

Figure 8.2-c. Update Letter

UPDATE PACKING LIST

Update #: ____________________________ Date: ______________

Name: Tape #: ______________

Date Copied: __________________________ Date Listed: ___________

Date Mailed to User: __________________ Date Returned: _________

Update #: _______ Returned: YES_____ NO_____

Type of Hardware: _____________________

Software Configuration:

Special Instructions:

Tape Enclosed: _______________

Tape Contents: _______________

Update Deck: _________________

Update Verification Form: _______

Documentation: _______________

Tape or Update Listing: _______

Problem Reporting Form: _______

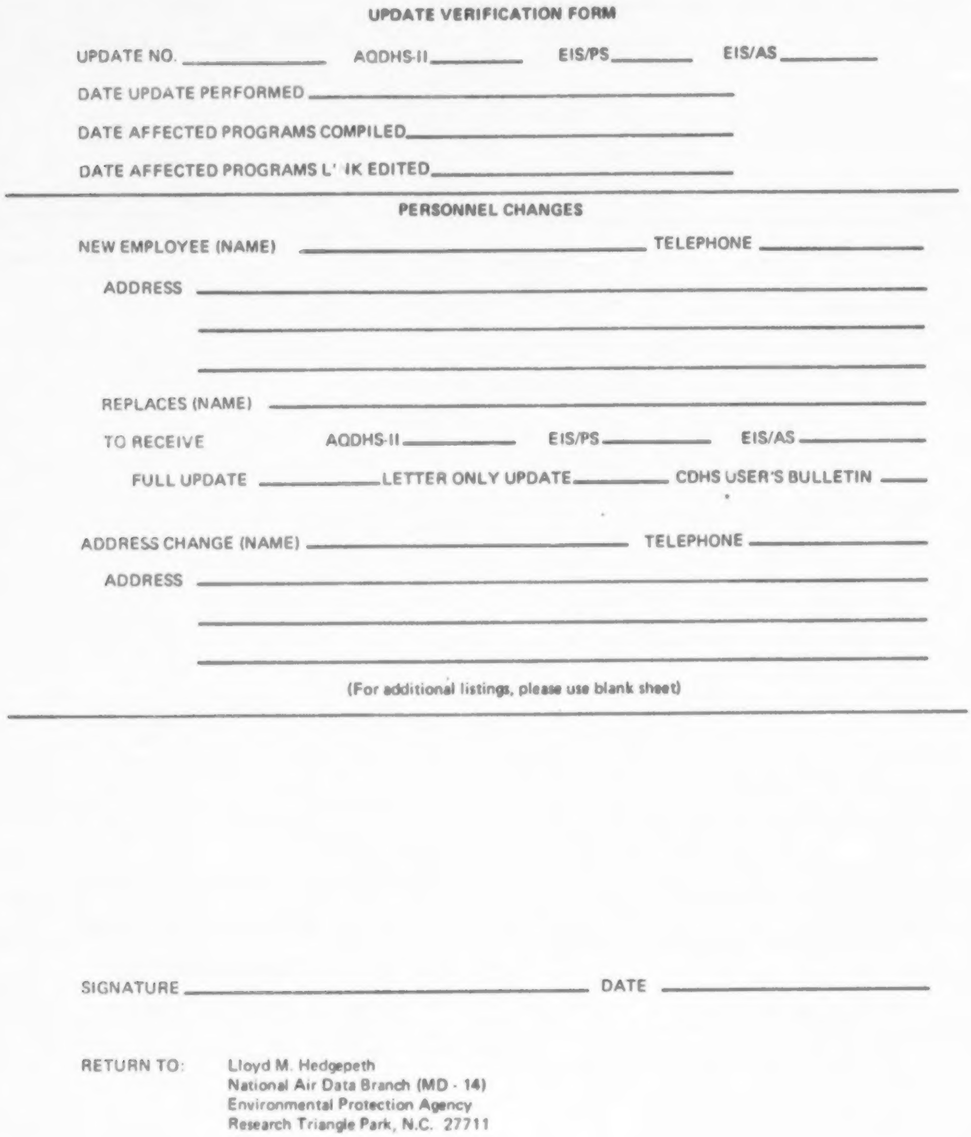
Update Deck Listing: _________

Update Packing List: _________

Update Cover Letter: _________

Verified by: ____

Figure 8.2-d. Update Packing List



UPDATE VERIFICATION FORM

UPDATE NO. ________ AQDHS-II ________ EIS/PS ________ EIS/AS ________

DATE UPDATE PERFORMED ________

DATE AFFECTED PROGRAMS COMPILED ________

DATE AFFECTED PROGRAMS LINK EDITED ________

PERSONNEL CHANGES

NEW EMPLOYEE (NAME) ________ TELEPHONE ________

ADDRESS ________

____

____

REPLACES (NAME) ________

TO RECEIVE AQDHS-II ________ EIS/PS ________ EIS/AS ________

FULL UPDATE ________ LETTER ONLY UPDATE ________ CDHS USER'S BULLETIN ________

ADDRESS CHANGE (NAME) ________ TELEPHONE ________

ADDRESS ________

____

____

(For additional listings, please use blank sheet)

SIGNATURE ________ DATE ________

RETURN TO:
Lloyd M. Hedgepeth
National Air Data Branch (MD - 14)
Environmental Protection Agency
Research Triangle Park, N.C. 27711

Figure 8.2-e. Update Verification Form

Attachment II

Contents of the EIS/P&R Update 27 Release Tape

File	Contents
1	CXNEDSCV, the NEDS point source to EIS/P&R conversion program
2	NXNEDSCV, the NEDS point source output program
3	FXFILMNT, the file maintenance program
4	QXQLEDIT, the quick look edit program
5	QXQLRETR, the quick look retrieval program
6	QXQLREPT, the quick look report program
7	QXQLTURN, the quick look turnaround document program
8	PNRQLRTR, the cataloged procedure to execute QXQLEDIT and QXQLRETR
9	PNRQLRPT, the cataloged procedure to execute QXQLEDIT, QXQLRETR, and QXQLREPT
10	PNRQLTRN, the cataloged procedure to execute QXQLEDIT, QXQLRETR, and QXQLTURN

8.2-f. Tape Contents

_____ Verify that package contents are correct
_____ Copy tape update onto private tape (tape update only)
_____ Return NADB tape (tape update only)
_____ Install documentation updates, if any
_____ Interpret update deck
_____ Run update utility to modify source programs
_____ Verify program updates
_____ Compile and link edit all modified programs
_____ Verify that all compiles and link edits are correct
_____ Run update utility to modify cataloged procedures (if applicable)
_____ Verify procedure updates (if applicable)
_____ Test modified programs and procedures
(move procedures to system library)
_____ Return completed update verification form
_____ Backup complete system

Figure 8.2-g. Checklist for Installing Update

```
//  EXEC PGM=IEBUPDTE,PARM=(MOD)
//SYSPRINT DD    SYSOUT=A
//SYSUT1 DD DISP=SHR,DSN=CN.EPALMH.A087.CDHS.HQ.PUR.SOURCE
//SYSUT2 DD DISP=SHR,DSN=CN.EPALMH.A087.CDHS.HQ.PUR.SOURCE
//SYSIN    DD    *
./ CHANGE NAME=FDFILMNT,LIST=ALL
./ NUMBER NEW1=100,INCR=100
         DATE-WRITTEN.       SEPTEMBER 20, 1979.                        00000500
                             REVISION LEVEL 3-01.                       00000600
      *  UPDATE 26 INSTALLED 09/20/79.                                  00001410
                 03  FILLER        PIC X(20) VALUE '3-01'.              00111400
                 03  FILLER        PIC X(20) VALUE '26'.                00111800
                 03  FILLER        PIC X(30) VALUE 'SEPTEMBER 20, 1979'.00112200
                   MOVE SW-ON TO BYPASS-CALC-SW.                        00180100
./ DELETE SEQ1=180200,SEQ2=180600
           IF SAVE-POINT-CONTROL-EFFICIENCY (POLLUTANT-SUB)             00286110
                 IS NOT NUMERIC                                         00286120
             MOVE ZERO TO EMISSION-REDUCTION                            00286130
           ELSE                                                         00286140
/*
```

Figure 8.2-h. Listing of Update Deck

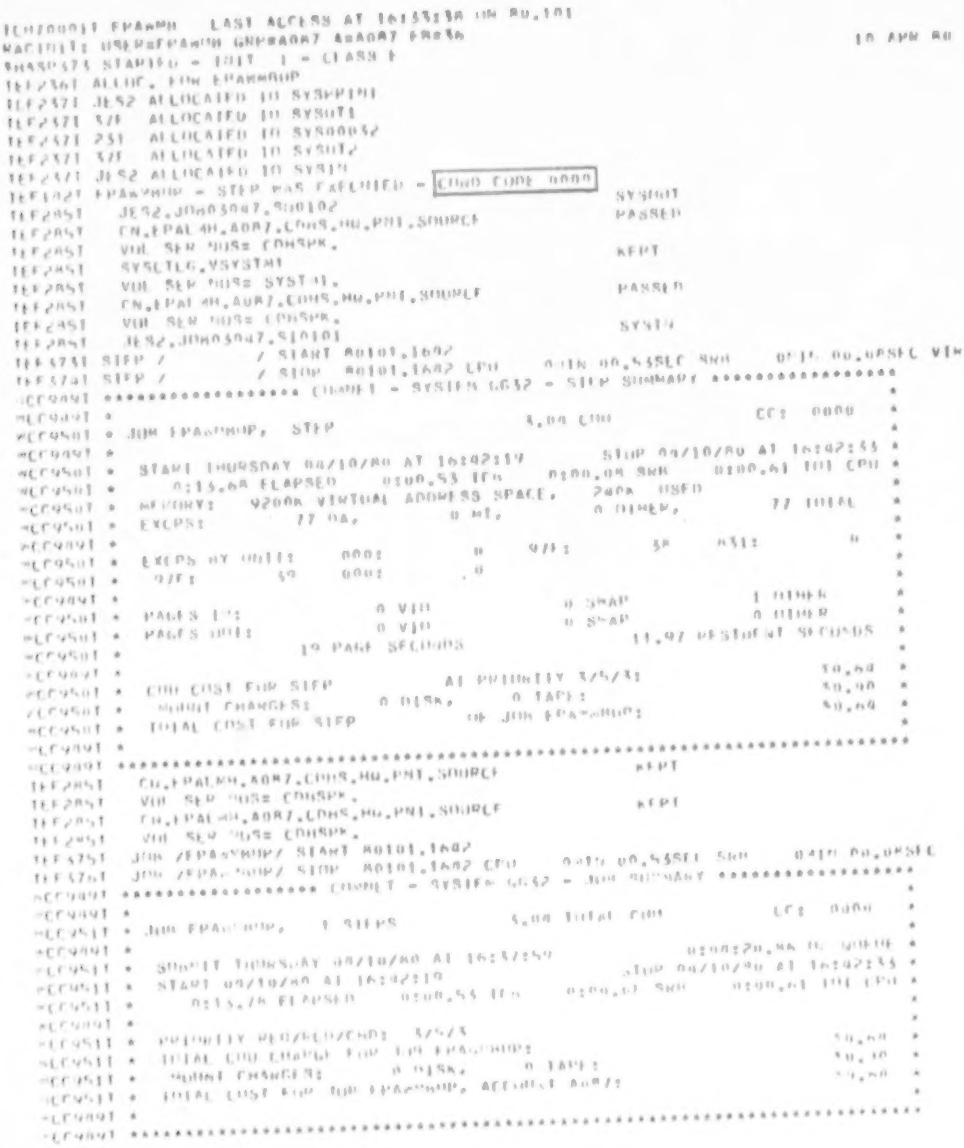


Figure 8.2-1. Condition Code for IEBUPDTE

```
      SYSIN                          OLD MASTER                              IEBUPDTE LOG PAGE 0030

IEB816I MEMBER NAME (PRPPSTR ) FOUND IN NM DIRECTORY. TTR IS NOW ALTERED.
IEB818I HIGHEST CONDITION CODE WAS 00000000
IEB819I END OF JOB IEBUPDTE.
```

Figure 8.2-j. Message Indicating Completion of
IEBUPDTE Modification

```
STMT NO. MESSAGE
-
    4     IEF653I SUBSTITUTION JCL - PGM=IKFCBL00,REGION=140K,PARM='SOURCE,NOZWB,DECK,SXREF,VERB,
    5     IEF653I SUBSTITUTION JCL - DSN=SYS2.COBOLINK,DISP=SHR
    7     IEF653I SUBSTITUTION JCL - SYSOUT=A,DCB=(RECFM=FBA,BLKSIZE=3146,LRECL=121)
    8     IEF653I SUBSTITUTION JCL - DUMMY,DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120)
   15     IEF653I SUBSTITUTION JCL - PGM=IEWL,PARM='LET,LIST,XREF,SIZE=(,)',
   15     IEF653I SUBSTITUTION JCL - REGION=250K,COND=(4,LT,COB)
   16     IEF653I SUBSTITUTION JCL - DSN=SYS2.COBOLLIB,DISP=SHR
   22     IEF653I SUBSTITUTION JCL - SYSOUT=A,DCB=(RECFM=FBA,LRECL=121,BLKSIZE=121)
   23     IEF686I DDNAME REFERRED TO ON DDNAME KEYWORD IN PRIOR STEP WAS NOT RESOLVED
ICH70001I EPALMH   LAST ACCESS AT 17:22:14 ON 80.101
RACINIT: USER=EPALMH GRP=A087 A=A087 FR=36
$HASP373 STARTED - INIT 12 - CLASS F                                               10 APR 80
IEF236I ALLOC. FOR EPALMH01 COB
IEF237I 211  ALLOCATED TO STEPLIB
IEF237I 211  ALLOCATED TO SYS00002
IEF237I 222  ALLOCATED TO SYSLIN
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I DMY  ALLOCATED TO SYSPUNCH
IEF237I 233  ALLOCATED TO SYSUT1
IEF237I 380  ALLOCATED TO SYSUT2
IEF237I 222  ALLOCATED TO SYSUT3
IEF237I 233  ALLOCATED TO SYSUT4
IEF237I 222  ALLOCATED TO SYSUT5
IEF237I 23F  ALLOCATED TO SYSIN
IEF237I 231  ALLOCATED TO SYS00004
IEC130I SYSLIB   DD STATEMENT MISSING
IEF142I EPALMH01 COB - STEP WAS EXECUTED - COND CODE 0004
IEF285I   SYS2.COBOLINK                                       KEPT
IEF285I   VOL SER NOS= APPL01.
IEF285I   SYSCTLG.VAPPL01                                     KEPT
IEF285I   VOL SER NOS= APPL01.
IEF285I   SYS80101.T214744.RA000.EPALMH01.OBJ400              PASSED
IEF285I   VOL SER NOS= WORK60.
IEF285I   JES2.JOB03098.SO0101                                SYSOUT
IEF285I   SYS80101.T214744.RA000.EPALMH01.SYSUT1              DELETED
IEF285I   VOL SER NOS= WORK58.
IEF285I   SYS80101.T214744.RA000.EPALMH01.SYSUT2              DELETED
IEF285I   VOL SER NOS= WORK59.
IEF285I   SYS80101.T214744.RA000.EPALMH01.SYSUT3              DELETED
IEF285I   VOL SER NOS= WORK60.
IEF285I   SYS80101.T214744.RA000.EPALMH01.SYSUT4              DELETED
IEF285I   VOL SER NOS= WORK58.
IEF285I   SYS80101.T214744.RA000.EPALMH01.SYSUT5              DELETED
IEF285I   VOL SER NOS= COMM60.
IEF285I   CN.EPALMH.A087.COBS.HW.PDT.SOURCE                   KEPT
IEF285I   VOL SER NOS= CPMSPK.
IEF285I   SYSCTLG.VSYSTM1                                     KEPT
IEF285I   VOL SER NOS= SYSTM1.
IEF373I STEP /COB     / START 80101.2147
IEF374I STEP /COB     / STOP  80101.2149 CPU    0MIN 04.89SEC SRB    0MIN 00.41SEC VIRT   172K SY
ACC999I ****************** COBOLT - SYSTEM GG32 - STEP SUMMARY ****************
ACC999I *                                                                      *
ACC950I * JOB EPALMH01,  STEP COB:              20.62 CPU          CC:  0004   *
ACC999I *                                                                      *
ACC950I *  START THURSDAY 04/10/80 AT 21:47:45        STOP 04/10/80 AT 21:49:59 *
ACC950I *      2:04.21 ELAPSED    0:00.89 TCB    0:00.41 SRB    0:05.30 TOT CPU *
ACC950I *  MEMORY:    920K VIRTUAL ADDRESS SPACE,    400K USED                  *
ACC950I *  EXCPS:        556 DA,        0 TT,        0 OTHER,        550 TOTAL  *
ACC999I *
```

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Figure 8.2-k. Completion Codes for Compiler and Linkage Editor

```
MCC950I *  EXCPS BY UNIT:    811:        0    811:        0    222:       13  *
MCC950I *   000:        0    000:        0    233:      123    3A0:       99  *
MCC950I *   222:      152    233:      106    222:        0    23E:       37  *
MCC950I *   231:        0                                                     *
MCC999I *                                                                     *
MCC950I *  PAGES IN:              0 VIO           18 SWAP           6 OTHER   *
MCC950I *  PAGES OUT:             0 VIO           26 SWAP           0 OTHER   *
MCC950I *               239 PAGE SECONDS            26.74 RESIDENT SECONDS    *
MCC999I *                                                                     *
MCC950I *  CPU COST FOR STEP COB      AT PRIORITY 1/1/1:               $2.76  *
MCC950I *   MOUNT CHANGES:       0 DISK,      0 TAPE:                  $0.00  *
MCC950I *  TOTAL COST FOR STEP COB      OF JOB EPALMH01:               $2.76  *
MCC999I *                                                                     *
MCC999I ***********************************************************************
IEF236I ALLOC. FOR EPALMH01 LKED
IEF237I 211  ALLOCATED TO SYSLIB
IEF237I 3BA  ALLOCATED TO
IEF237I 3BA  ALLOCATED TO
IEF237I 212  ALLOCATED TO SYS00008
IEF237I 211  ALLOCATED TO SYS00006
IEF237I 222  ALLOCATED TO SYSLIB
IEF237I DMY  ALLOCATED TO
IEF237I 23E  ALLOCATED TO SYSLMOD
IEF237I 231  ALLOCATED TO SYS00010
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 233  ALLOCATED TO SYSUT1
IEF142I EPALMH01 LKED - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYS2.COBOLLIB                                  KEPT
IEF285I   VOL SER NOS= APPL01.
IEF285I   SYS3.COMNET.SYSLIB                             KEPT
IEF285I   VOL SER NOS= MVSSYS.
IEF285I   SYS1.FORTLIB                                   KEPT
IEF285I   VOL SER NOS= MVSSYS.
IEF285I   SYSCTLG.VUSER88                                KEPT
IEF285I   VOL SER NOS= USER88.
IEF285I   SYSCTLG.VAPPL01                                KEPT
IEF285I   VOL SER NOS= APPL01.
IEF285I   SYS80101.T214704.RA000.EPALMH01.OBJMOD         DELETED
IEF285I   VOL SER NOS= WORK60.
IEF285I   CN.EPALMH.ADR7.CDHS.MW.PNT.LOAD                KEPT
IEF285I   VOL SER NOS= CDHSPK.
IEF285I   SYSCTLG.VSYSTM1                                KEPT
IEF285I   VOL SER NOS= SYSTM1.
IEF285I   JES2.JOB03098.SO0102                           SYSOUT
IEF285I   SYS80101.T214704.RA000.EPALMH01.SYSUT1         DELETED
IEF285I   VOL SER NOS= WORK58.
IEF373I STEP /LKED    / START 80101.2149
IEF374I STEP /LKED    / STOP  80101.2149 CPU    0MIN 00.51SEC SRB    0MIN 00.09SEC VIRT
MCC999I ****************** COMNET - SYSTEM 6652 - STEP SUMMARY *****************
MCC999I *                                                                     *
MCC950I * JOB EPALMH01,  STEP LKED:            0.26 CPU            CC:  0000  *
MCC999I *                                                                     *
MCC950I *  START THURSDAY 04/10/80 AT 21:49:49      STOP 04/10/80 AT 21:49:59 *
MCC950I *     0:09.51 ELAPSED    0:00.51 TCB    0:00.09 SRB    0:00.60 TOT CPU *
MCC950I *  MEMORY:   920K VIRTUAL ADDRESS SPACE,   408K USED                  *
MCC950I *  EXCPS:        123 DA,        0 T,        0 OTHER,       123 TOTAL  *
MCC999I *                                                                     *
MCC950I *  EXCPS BY UNIT:    211:       94    3BA:        0    3BA:        0  *
MCC950I *   212:        0    211:        0    222:       18    DMY:        0  *
MCC950I *   23E:       16    231:        0    000:        0    233:        0  *
MCC999I *                                                                     *
```

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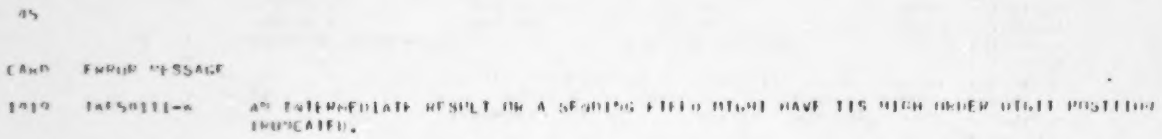
Figure 8.2-k. Condition Codes for Compiler and Linkage Editor



```
45

CARD   ERROR MESSAGE

1019   IKF5011I-W     AN INTERMEDIATE RESULT OR A SENDING FIELD MIGHT HAVE ITS HIGH ORDER DIGIT POSITION
                      TRUNCATED.
```

Figure 8.2-1. Error Message from Compiler

```
F88-LEVEL LINKAGE EDITOR OPTIONS SPECIFIED LET,LIST,XREF,SIZE=(,)
          DEFAULT OPTION(S) USED -  SIZE=(196608,65536)

                                                    CROSS REFERENCE TABLE

 CONTROL SECTION                         ENTRY

   NAME     ORIGIN   LENGTH               NAME     LOCATION     NAME     LOCATION     NAME     LOCATION     NAME     LOCATION
 PRP4SIR       00     44EE
 ILBODBG *   44F0      D70               ILBODBG0    4522     ILBODBG1    4526     ILBODBG2    452A     ILBODBG3    452E
                                          ILBODBG4    4532     ILBODBG5    4536     ILBODBG6    453A     ILBODBG7    453E

 ILBOFXT *   5260       6A               ILBOFXT0    5262

 ILBOFLW *   52D0      4E0               ILBOFLW0    5302     ILBOFLW1    5306     ILBOFLW2    530A

 ILBOSPA *   57B0      472               ILBOSPA0    57F2     ILBOSPA1    57F6

 ILBOSRV *   5C28      37C               ILBOSRV0    5C62     ILBOSR      5C62     ILBOSR3     5C62     ILBOSRV1    5C66
                                          ILBOSTP1    5C66     ILBOST      5C6A     ILBOSTP0    5C6A

 ILBOATB *   5FA8      142               ILBOATB0    5FDA

 ILBOANF *   60F0      17C               ILBOANF0    60F2

 ILBOBEG *   6270       C2               ILBOBEG0    62A2

 ILBOCMM *   6338      3C1               ILBOCMM0    636A     ILBOCMM1    636E

 ILBOCOM0*   6700       FA               ILBOCOM     6700

 ILBOMSG *   6800       D0               ILBOMSG0    6832


 LOCATION  REFERS TO SYMBOL  IN CONTROL SECTION          LOCATION  REFERS TO SYMBOL  IN CONTROL SECTION
    1A70            ILBOSRV0          ILBOSRV               1A74            ILBODBG0          ILBODBG
    1A78            ILBOFLW0          ILBOFLW               1A7C            ILBOSR            ILBOSRV
    1A80            ILBOFLW1          ILBOFLW               1A84            ILBODBG4          ILBODBG
    1A88            ILBOSRV1          ILBOSRV               1A8C            ILBOFXT0          ILBOFXT
    1A90            ILBOSPA0          ILBOSPA               1A94            ILBOATB0          ILBOATB
    1A98            ILBOANF0          ILBOANF               1A9C            ILBOCMM0          ILBOCMM
    5120            ILBOFLW0          ILBOFLW               5128            ILBOFLW2          ILBOFLW
    512C            ILBOTEF3         $UNRESOLVED(W)         5130            ILBOSTN0         $UNRESOLVED(W)
    5F10            ILBOCOM           ILBOCOM0              5F14            ILBOCMM0          ILBOCMM
    5F18            ILBOBEG0          ILBOBEG               5F1C            ILBOMSG0          ILBOMSG

 ENTRY ADDRESS         00

 TOTAL LENGTH        68D0
****PRP4SIR   NOW REPLACED IN DATA SET
```

Figure 8.2-m. Linkage Editor Message

```
PP 5734-CB2 V4 RELEASE 1.4 01AUG76        IBM OS AMERICAN NATIONAL STANDARD COBOL                    DATE APR 10,1980

   1

IKF0011I-W SYSLIB NOT USABLE. COMPILATION CONTINUING.
```

Figure 8.2-n. Compiler Version Message

```
//* EPALMH/A087  HEDGEPETH, LLOYD M.  (919)541-5491                     00000100
//*                                                                     00000200
//*   PROCEDURE NAME: EPCLC10                                           00000300
//*   REVISION LEVEL: 1-00                                              00000400
//*   LAST UPDATE #: P-1                                                00000500
//*   DATE INCORPORATED: FEBRUARY 1, 1980                               00000600
//*                                                                     00000700
//*                                                                     00000800
//*   THIS PROCEDURE ALLOWS THE USER TO COMPILE AND LINK-EDIT COBOL     00000900
//*   PROGRAMS                                                          00001000
//*                                                                     00001100
//*                                                                     00001200
//EPCLC10 PROC PROJECT='CH.EPALMH.A087.CDHS.HQ.PNT',                    00001300
//             PARAM='DMAP,SXREF,LIB,SIZE=114K,BUF=30K,STATE,FLOW=10',  00001400
//             PRIMARY=50,                                              00001500
//             SPCUNIT=TRK,                                             00001600
//             SECNDRY=100,                                             00001700
//             M2=NULL,                                                 00001800
//             M3=NULL,                                                 00001900
//             M4=NULL,                                                 00002000
//             M5=NULL,                                                 00002100
//             M6=NULL,                                                 00002200
//             M7=NULL,                                                 00002300
//             M8=NULL,                                                 00002400
//             SOURCE=NULL,                                             00002500
//             LOADMOD=NULL,                                            00002600
//             PRIM1=60,                                                00002700
//             PRIM2=60,                                                00002800
//             TEMP=SYSDA                                               00002900
//*                                                                     00003000
//COBOL   EXEC PGM=IKFCBL00,                                            00003100
//             REGION=130K,                                             00003200
//             PARM='&PARAM'                                            00003300
//*                                                                     00003400
//* EXECUTE COBOL COMPILER                                              00003500
//*                                                                     00003600
//SYSLIB     DD DSNAME=&PROJECT..SOURCE,                                00003700
//              VOLUME=(PRIVATE,RETAIN),                                00003800
//              DISP=(SHR,PASS)                                         00003900
//*                                                                     00004000
//* INPUT DATA SET - SOURCE MODULE                                      00004100
//*                                                                     00004200
//SYSIN      DD DSNAME=&PROJECT..SOURCE(&SOURCE),                       00004300
//              VOLUME=(PRIVATE,RETAIN),                                00004400
//              DISP=(SHR,PASS)                                         00004500
//*                                                                     00004600
//           DD DSNAME=&PROJECT..SOURCE(&M2),                           00004700
//              VOLUME=(PRIVATE,RETAIN),                                00004800
//              DISP=(SHR,PASS)                                         00004900
//*                                                                     00005000
//           DD DSNAME=&PROJECT..SOURCE(&M3),                           00005100
//              VOLUME=(PRIVATE,RETAIN),                                00005200
//              DISP=(SHR,PASS)                                         00005300
//*                                                                     00005400
//           DD DSNAME=&PROJECT..SOURCE(&M4),                           00005500
//              VOLUME=(PRIVATE,RETAIN),                                00005600
```

(page 1 of 3)

Figure 8.2-o. Cataloged Procedure EPCLC10

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```
//             DISP=(SHR,PASS)                                          00005700
//*                                                                     00005800
//          DD DSNAME=&PROJECT..SOURCE(&M5),                            00005900
//             VOLUME=(PRIVATE,RETAIN),                                 00006000
//             DISP=(SHR,PASS)                                          00006100
//*                                                                     00006200
//          DD DSNAME=&PROJECT..SOURCE(&M6),                            00006300
//             VOLUME=(PRIVATE,RETAIN),                                 00006400
//             DISP=(SHR,PASS)                                          00006500
//*                                                                     00006600
//          DD DSNAME=&PROJECT..SOURCE(&M7),                            00006700
//             VOLUME=(PRIVATE,RETAIN),                                 00006800
//             DISP=(SHR,PASS)                                          00006900
//*                                                                     00007000
//          DD DSNAME=&PROJECT..SOURCE(&M8),                            00007100
//             VOLUME=(PRIVATE,RETAIN),                                 00007200
//             DISP=(SHR,PASS)                                          00007300
//*                                                                     00007400
//* OUTPUT DATA SET - OBJECT MODULE                                     00007500
//*                                                                     00007600
//SYSLIN    DD DSN=&&OBJMOD,UNIT=&TEMP,                                 00007700
//          SPACE=(CYL,(5,2),RLSE),DISP=(NEW,PASS)                      00007800
//*                                                                     00007900
//* INPUT/OUTPUT DATA SETS - SYSTEM OPERATION                           00008000
//*                                                                     00008100
//SYSPRINT  DD SYSOUT=A                                                 00008200
//*                                                                     00008300
//SYSUT1    DD UNIT=&TEMP,                                              00008400
//             SPACE=(TRK,(&PRIMARY,&SECNDRY))                          00008500
//*                                                                     00008600
//SYSUT2    DD UNIT=(&TEMP,SEP=SYSUT1),                                 00008700
//             SPACE=(TRK,(&PRIMARY,&SECNDRY))                          00008800
//*                                                                     00008900
//SYSUT3    DD UNIT=(&TEMP,SEP=(SYSUT1,SYSUT2)),                        00009000
//             SPACE=(TRK,(&PRIMARY,&SECNDRY))                          00009100
//*                                                                     00009200
//SYSUT4    DD UNIT=(&TEMP,SEP=(SYSUT1,SYSUT2,SYSUT3)),                 00009300
//             SPACE=(TRK,(&PRIMARY,&SECNDRY))                          00009400
//*                                                                     00009500
//*                                                                     00009600
//*                                                                     00009700
//CBLLE   EXEC PGM=IEWL,                                                00009800
//             COND=(5,LT,COBOL),                                       00009900
//             PARM='LIST,LET,XREF',                                    00010000
//             REGION=100K,                                             00010100
//             TIME=(1,0)                                               00010200
//*                                                                     00010300
//* LINK-EDIT THE OBJECT MODULE                                         00010400
//*                                                                     00010500
//*                                                                     00010600
//SYSLIB    DD DSNAME=&PROJECT..LOAD,                                   00010700
//             VOLUME=(PRIVATE,RETAIN),                                 00010800
//             DISP=(SHR,PASS)                                          00010900
//          DD DSNAME=SYS1.COBLIB,                                      00011000
//             VOLUME=(PRIVATE,RETAIN),                                 00011100
//             DISP=(SHR,PASS)                                          00011200
```

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Figure 8.2-o - continued. Cataloged Procedure EPCLC10

```
//*                                                                     00011300
//* INPUT DATA SET - OBJECT MODULE                                      00011400
//*                                                                     00011500
//SYSLIN     DD DSNAME=&&OBJMOD,                                        00011600
//              DISP=(SHR,PASS)                                         00011700
//*                                                                     00011800
//* OUTPUT DATA SET - LOAD MODULE                                       00011900
//*                                                                     00012000
//LOAD       DD DSNAME=&PROJECT..LOAD,                                  00012100
//              VOLUME=(PRIVATE,RETAIN),                                00012200
//              DISP=(SHR,PASS)                                         00012300
//*                                                                     00012400
//SYSLMOD    DD DSNAME=&PROJECT..LOAD(&LOADMOD),                        00012500
//              VOLUME=(PRIVATE,RETAIN),                                00012600
//              DISP=(OLD,PASS)                                         00012700
//*                                                                     00012800
//* INPUT/OUTPUT DATA SETS - SYSTEM OPERATION                           00012900
//*                                                                     00013000
//SYSUT1     DD UNIT=&TEMP,                                             00013100
//              SPACE=(&SPCUNIT,(&PRIM1,&PRIM2),,CONTIG)                00013200
//*                                                                     00013300
//SYSPRINT   DD SYSOUT=A                                                00013400
//*                                                                     00013500
```

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Figure 8.2-o - continued. Cataloged Procedure EPCLC10

Parameter Name	Default Value	Description
PROJECT	'CN.EPALMH.A087.CDHS.HQ.PNT'	Highest-level index of data set names (e.g. the EIS/PS source library is CN.EPALMH.A087.CDHS.HQ.PNT.SOURCE)
PARAM	'DMAP,SXREF,LIB,SIZE=114K, BUF=30K,STATE,FLOW=10'	Parameters used by the compiler. Information on these parameters can be found in the IBM COBOL Programmer's Guide
PRIMARY	50	Primary space allocation for temporary files used by compiler
SPCUNIT	TRK	Units in which space is to be allocated for temporary file used by linkage editor

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Figure 8.2-p. Substitutable Parameters for EPCLC10

Parameter Name	Default Value	Description
SECNDRY	100	Secondary space allocation for temporary files used by compiler
M2 thru M8	NULL	Source library members concatenated onto the primary program (no source library members are concatenated onto any EIS/PS program)
SOURCE	NULL	Name of source library module for program
LOADMOD	NULL	Name of load library module for program
PRIM1	60	Primary spaces allocation for temporary file used by linkage editor
PRIM2	60	Secondary space allocation for temporary file used by linkage editor
TEMP	SYSDA	Unit type specified for temporary file

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Figure 8.2-p - continued. Substitutable Parameters for EPCLC10

8.3 INSTALLATION OF EIS/PS

8.3.1 INTRODUCTION

The information contained in this section is intended to supplement the instructions in the letter sent with an installation package. Only those installations using standard IBM utilities are addressed herein.

To obtain a copy of EIS/PS, a blank tape certified at 1600 BPI must be sent to NADB. The type of computer that will be used and the recording specifications for the tape should be specified in the letter.

A checklist of tasks for the installation is shown in Figure 8.3-a.

8.3.2 INITIAL PREPARATION

The installation package should contain a letter (see Figure 8.3-b); an installation deck and listing (see Figure 8.3-c); the tape containing EIS/PS source, procedure, and test data sets; an EIS/PS User's Guide; back copies of the CDHS User's Bulletin; and a System Status/Hardware/Software Questionnaire (see Figure 8.3-d). If any of these items are missing, the user should report this problem to personnel at EPA-NADB.

The cards in the installation deck are not interpreted; however, the contents of each card can be printed on the cards by processing the deck through an interpreting keypunch machine. This interpreting should be done because changes must be made to the cards to reflect the user's particular data set names.

The data sets used for the source, load, procedure, and test libraries are created in the step named ALLOC using the IBM program IEFBR14. The names of these data sets should be changed to reflect the installation-dependent data set naming conventions. The space allocated assumes the use of 3330 disk packs; if other units are used, both the unit and the space allocations should be modified to reflect the units used. The value CDHSPK should be changed to indicate the volume serial number of the disk device used.

Data set names, units, and volume serial numbers in the remainder of the installation deck should also be changed to correspond with the values used in the ALLOC step.

The step named PUNCH punches the test run series on computer cards. The numbered PRINT steps (e.g., PRINT1, PRINT2,...) print the cataloged procedures, the test run series, and the source code of all programs. It may be desirable to run these steps separately since the program listings will generate a large volume of paper. To run these steps separately, the installation deck must be divided into several decks, each containing one or more steps.

8.3.3 INSTALLATION JOB EXECUTION

Once the installation deck has been modified, the installation job may be run. A job card must be added and sufficient time and page parameters should be specified (suggested time and page estimates are included in the installation deck as comments). Information on job cards can be is found in Section 8.1.

When the job has been run, the condition codes for each step should be verified. Condition codes should be 0 (zero) for successful completion (see Figure 8.3-e).

8.3.4 PROGRAM MODIFICATION

The EIS/PS baseline programs should run with no modifications on most IBM computers. However, some changes may be necessitated by the file requirements of a particular installation. Information on EIS/PS file specifications can be found in Appendix D. Note that the blocking factors for all files can be modified without affecting the program line numbers.

Non-IBM users will need to make more extensive modifications. Information on the changes required for each type of hardware can be obtained from EPA-NADB.

If other user-specified modifications are desired, a copy of the baseline version should also be maintained since all updates issued by NADB are for the baseline programs only. If line numbers in the user's program have been modified, an update to that program will not be applied correctly.

See Section 8.2.3.1 for additional information on program modification.

8.3.5 PROCEDURE MODIFICATION

The programs in EIS/PS are executed using cataloged procedures. Information on cataloged procedures can be found in Section 8.1.6 and information on individual procedures can be found in the discussions of cataloged JCL which are included in the discussions of the EIS/PS programs.

Each procedure contains substitutable parameters for such items as project, unit, and volume serial number. Each of these items may be changed at execution time following instructions given in the sample run streams. Since some of these variables remain fairly constant for a given installation, they may be changed in the procedures themselves so that the changes need not be made each time the procedure is executed. The substitutable parameters are listed on and immediately following the PROC statement for each procedure.

As an example of these changes, suppose the procedure contains the following statements:

```
//      PROJECT='CN.EPALMH.A087.CDHS.HQ.PNT',          00000800
//      UNIT=3330,                                     00000900
//      SERIAL=CDHSPK                                  00001000
```

Assume these variables have the values 'F734.CDHS.PNT', 2314, and PACK27 at a user's installation. He could then modify the procedure, replacing the three statements with the following statements:

```
//      PROJECT='F734.CDHS.PNT',                       00000800
//      UNIT=2314,                                     00000900
//      SERIAL=PACK27                                  00001000
```

The line numbers (columns 73-80) should be left as in the baseline version to facilitate updates to the procedures. Any substitutable parameter may be modified in a procedure without affecting the line numbers.

Procedures should be moved to a system procedure library once they have been tested. The user is advised to consult with his systems personnel before attempting to accomplish this step.

8.3.6 COMPILING PROGRAMS

Once IEHMOVE has been performed (step TAPEIN of the installation deck) and the source programs are in the source library, the programs must be compiled and link edited. There is a cataloged procedure in EIS/PS to execute either the COBOL compiler in conjunction with the linkage editor: EPCLC10. See Sections 8.2.4.1 and 8.2.4.2 for instructions on using these procedures.

After each program has been compiled and link edited, the condition codes for each step of the job should be checked to insure that they are either 4 or 0 (see Figure 8.2-k). Also, any error messages from the compile step (see Figure 8.2-l) should be inspected. If the return code is not 4 or 0 for any job step, contact personnel at NADB and forward the listing of that job to NADB. The printout from the linkage editor should indicate that the load module was added to the data set (see Figure 8.2-m).

8.3.7 TESTING THE SYSTEM

A test run series, stored in a test library, is provided on the installation tape to test all programs and procedures in EIS/PS. The volume of the data in the test run series is much smaller than in the live data files most states maintain. Running tests with these smaller files means lower costs; also, there is no risk of destroying live files if any test should fail. The final EIS/PS master and emission factor files created in the test run series should be stored on tape and used for testing future updates. This allows any program to be tested without requiring that the entire test run series be run to create these files.

8.3.8 COST CONSIDERATIONS

The following examples provide an estimate of the cost of creating the libraries, printing the listings, and compiling a program on an IBM 370/168.

Copy EIS/PS from tape to disk using the IEHMOVE utility:

CPU time:	18 seconds
I/O time:	1 minute 54 seconds
Total time:	2 minutes 12 seconds
Estimated cost:	$32.23

Print listings of the EIS/PS programs:

Number of programs:	27 programs
Number of lines:	37,851 lines
CPU time:	15 seconds
I/O time:	2 minutes 01 seconds
Total time:	2 minutes 16 seconds
Estimated cost:	$24.05

Compile and link edit for program with 3800 statements:

CPU time:	22.7 seconds
I/O time:	1 minute 36.5 seconds
Total time:	1 minute 59.2 seconds
Estimated cost:	$25.43

8.3.9 WARNINGS AND SPECIAL INSTRUCTIONS

Each user is reminded not to make any modifications to EIS/PS programs or procedures other than those modifications released or approved by NADB. Only the NADB baseline version of EIS/PS will be supported by NADB. All modified versions (unless authorized to meet a specific computer system problem) must be supported by the organization which performs the modification.

If the user wishes to make modifications for his own purposes, he should make them to a copy of the baseline system. He should, however, maintain the baseline system with no changes. Thus, if a problem occurs in the user's system and it is reproduced in the baseline, the user should report the problem to NADB. If the problem occurs in the modified version only, it is the user's responsibility to correct the problem.

If there are any problems in installing EIS/PS, contact NADB for further help.

The user should maintain a backup of the source, load, and procedure libraries as well as all files used in EIS/PS. Systems personnel should be consulted on the proper techniques in creating backups of the EIS/PS system.

__________Verify that the installation package contents are correct

__________Interpret installation deck

__________Modify installation deck as needed

__________Run installation job

__________Verify installation programs

__________Modify programs as needed

__________Compile and link edit all programs

__________Verify that all compiles and link edits are correct

__________Modify cataloged procedures as needed

__________Test programs and procedures

__________Move procedures to system libraries

__________Back up complete system

__________Create initial files with live data

__________Inform NADB that installation is complete using System Status/ Software/Hardware Questionnaire.

Figure 8.3-a. Checklist for Installing EIS/PS

Mr. Larry McMaster
Research Triangle Institute
Research Triangle Park, NC 27709

Dear Mr. McMaster

Enclosed is a tape to which I have copied the EIS/PS subsystem of CDHS. I am enclosing a copy of the JCL printout which resulted from the copy. Please note that the IBM utility IEHMOVE was used in creating your tape. Since IEHMOVE copies the data sets to your tape in an unloaded format, it will be necessary to use IEHMOVE to copy the system from this tape to your disk before you can obtain a readable printout. The tape was copied using no system labels and was recorded at 1600 BPI.

To aid you in the installation, I am also enclosing an "installation deck", which is set up for an IBM (OS) computer, and a listing of it. There are three data sets on your tape, each containing several members. These members are

```
DSNAME=CDHS.PNT.JCL
DSNAME=CDHS.PNT.JOBS
DSNAME=CDHS.PNT.SOURCE
```

Necessary disk space for each data set is allocated in the first step of the installation using IEFBR14. The actual copy from tape to disk is accomplished using IEHMOVE. The load modules will be created when you compile and link edit the programs. Also, if you wish to re-name the data sets when you copy then from tape to disk, you can do so by adding the appropriate control card in each COPY statement.

The installation deck is also set up to punch out all jobs required to accomplish the following:

Copy cataloged procedures to PROCLIB
Compile and link edit all programs
Run test programs using test data supplied with the installation (run in order)

It is also set up to print all the JOBS which were punched, as well as all source code and the JCL for all the cataloged procedures.

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Figure 8.3-b. Installation Letter

Please note that it will be necessary for you to make changes to the installation deck to suit your local situation. For example, you may not use 3330 disk packs at your installation, and I am sure that your disk volume serial number will not be CDHSPK. Your tape unit designation may not be 2400, and you may wish to re-name the data sets when copying them from the tape to your disk.

After you have installed the system, it will be necessary for you to change several lines of coding in the cataloged procedures prior to copying them into your PROCLIB. A complete list of these procedures is attached.

Should you choose to retain the prefix of CDHS.PNT. for your data set names, you should change the appropriate line of each procedure to read:

```
//ddname PROC PROJECT='CDHS.PNT',
```

An equivalent change must also be made if you choose a different prefix for your data set names. Similar changes will be required in the data set names specified on the DD cards (DSNAME=CDHS.PNT.JOBS).

I urge you not to make any modifications other than those which must be made to the Job Control Language (JCL). NADB will make all modifications to the standard NADB system, and will support ONLY NADB-modified versions of the system.

If you wish to make modifications for your own purposes, you should make them to a copy of the baseline system. You should, however, maintain the baseline system incorporating only those changes distributed by NADB. This will give you an opportunity to test problems against the baseline. If you have a problem, and the problem is reproduced in the baseline, please report the problem to NADB. If the problem occurs in the modified version only, it is your responsibility to correct that problem.

Update 1 has been incorporated into your system; thus, the next EIS/PS update to your system will be number 2.

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Figure 8.3-b - continued. Installation Letter

Also included are a copy of the EIS/PS User's Guide, all back issues of the CDHS User's Bulletin, and a copy of the System Status/Hardware/Software Questionnaire. This questionnaire should be completed and returned to me when your installation is complete.

If you have any questions, do not hesitate to call me at (919) 541-5491.

Sincerely yours,

Lloyd M. Hedgepeth
Project Officer
National Air Data Branch (MD-14)

Enclosures

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Figure 8.3-b - continued. Installation Letter

Attachment 1 - EIS/AS Cataloged Procedure

EPCET10
EPCVE10
EPEDT10
EPEME10
EPEME20
EPEMM10
EPFMM10
EPFMM20
EPFMM30
EPMSM10
EPMST10
EPMST20
EPRPE10
EPRPM10
EPRPM20
EPRPM30
EPRPM50
EPRPM60
EPRPM70
EPRTM10
EPRTM20
EPRTM30
EPRTM40
EPSRM10
EPSRM20
EPSRM30
EPCLC10

Figure 8.3-b - continued. Installation Letter

```
//*
//* EIS/PS INSTALLATION
//*
//* THIS JOB WILL SCRATCH AND RE-ALLOCATE ALL DATA SETS NECESSARY FOR
//*
//* THE INSTALLATION OF EIS/PS.  IT WILL THEN COPY THE INSTALLATION
//*
//* TAPE INTO THESE DATA SETS AND PUNCH THE JOBS REQUIRED TO COMPILE
//*
//* AND LINK-EDIT THE VARIOUS PROGRAMS IN THE SYSTEM.  IT WILL THEN
//*
//* PRINT THOSE JOBS, THE CATALOGED PROCEDURES, THE LINKAGE EDITOR
//*
//* CONTROL CARDS, AND THE TEST DATA.  THE
//*
//* LISTING SHOULD BE EXAMINED TO BE CERTAIN THAT THE PROCEDURES ARE
//*
//* CORRECT FOR THIS PARTICULAR COMPUTER CENTER.  AFTER ANY NECESSARY
//*
//* CHANGES HAVE BEEN MADE, THE JOBS PUNCHED OUT MAY BE RUN
//*
//* SEQUENTIALLY TO INSTALL AND TEST EIS/PS.
//*
//SCRATCH EXEC PGM=IEFBR14,
//             TIME=(0,5),
//             REGION=4K
//JCL        DD DISP=(OLD,DELETE),
//             DSNAME=CDHS.PNT.JCL
//JOBS       DD DISP=(OLD,DELETE),
//             DSNAME=CDHS.PNT.JOBS
//LOAD       DD DISP=(OLD,DELETE),
//             DSNAME=CDHS.PNT.LOAD
//SOURCE     DD DISP=(OLD,DELETE),
//             DSNAME=CDHS.PNT.SOURCE
//ALLOC   EXEC PGM=IEFBR14,
//             REGION=4K,
//             TIME=(0,5)
//JCL        DD UNIT=3330,
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),
//             DISP=(NEW,CATLG,DELETE),
//             SPACE=(TRK,(20,10,5)),
//             DSNAME=CDHS.PNT.JCL
//JOBS       DD UNIT=3330,
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),
//             DISP=(NEW,CATLG,DELETE),
//             SPACE=(TRK,(10,10,5)),
//             DSNAME=CDHS.PNT.JOBS
//LOAD       DD UNIT=3330,
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),
//             DISP=(NEW,CATLG,DELETE),
```

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Figure 8.3-c. EIS/PS Installation Deck

```
//              SPACE=(TRK,(40,10,5)),                                  00005100
//              DSNAME=CDHS.PNT.LOAD                                    00005200
//SOURCE     DD UNIT=3330,                                              00005300
//              VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),                     00005400
//              DISP=(NEW,CATLG,DELETE),                                00005500
//              SPACE=(TRK,(100,50,5)),                                 00005600
//              DSNAME=CDHS.PNT.SOURCE                                  00005700
//TAPEIN   EXEC PGM=IEHMOVE,                                            00005800
//              REGION=90K,                                             00005900
//              TIME=(5,0)                                              00006000
//SYSPRINT   DD SYSOUT=A                                                00006100
//SYSUT1     DD UNIT=3330,                                              00006200
//              VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),                     00006300
//              DISP=OLD                                                00006400
//CDHSPK     DD UNIT=3330,                                              00006500
//              VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),                     00006600
//              DISP=OLD                                                00006700
//TAPE       DD UNIT=TAPE,                                              00006800
//              VOLUME=SER=PSTAPE,                                      00006900
//              DISP=(NEW,PASS),                                        00007000
//              LABEL=(,BLP),                                           00007100
//              DCB=(RECFM=FB,LRECL=80,BLKSIZE=800,DEN=3)               00007200
//SYSIN      DD *                                                       00007300
         COPY   TO=3330=CDHSPK,FROMDD=TAPE,FROM=TAPE=(PSTAPE,1),       X00007400
                PDS=CDHS.PNT.JCL                                        00007500
         COPY   TO=3330=CDHSPK,FROMDD=TAPE,FROM=TAPE=(PSTAPE,2),       X00007600
                PDS=CDHS.PNT.JOBS                                       00007700
         COPY   TO=3330=CDHSPK,FROMDD=TAPE,FROM=TAPE=(PSTAPE,3),       X00007800
                PDS=CDHS.PNT.SOURCE                                     00007900
//PUNCH    EXEC PGM=IEBPTPCH,                                           00008000
//              REGION=60K,                                             00008100
//              TIME=(1,0)                                              00008200
//SYSPRINT   DD SYSOUT=A                                                00008300
//SYSUT1     DD DSNAME=CDHS.PNT.JOBS,                                   00008400
//              VOLUME=(PRIVATE,RETAIN),                                00008500
//              DISP=(SHR,PASS)                                         00008600
//SYSUT2     DD SYSOUT=B                                                00008700
//SYSIN      DD *                                                       00008800
         PUNCH TYPORG=PO,MAXNAME=2                                      00008900
//PRINT1   EXEC PGM=IEBPTPCH,                                           00009000
//              REGION=60K,                                             00009100
//              TIME=(1,0)                                              00009200
//SYSPRINT   DD SYSOUT=A                                                00009300
//SYSUT1     DD DSNAME=CDHS.PNT.JCL,                                    00009400
//              VOLUME=(PRIVATE,RETAIN),                                00009500
//              DISP=(SHR,PASS)                                         00009600
//SYSUT2     DD SYSOUT=A                                                00009700
//SYSIN      DD *                                                       00009800
         PRINT  TYPORG=PO,MAXFLDS=1                                     00009900
         TITLE  ITEM=('  EIS/PS CATALOGED PROCEDURES',1)                00010000
         TITLE  ITEM=(' ',1)                                            00010100
         RECORD FIELD=(80,1,,25)                                        00010200
```

(Page 2 of 3)

Figure 8.3-c - continued. EIS/PS Installation Deck

```
//PRINT2  EXEC PGM=IEBPTPCH,
//             REGION=60K,
//             TIME=(1,0)
//SYSPRINT  DD SYSOUT=A
//SYSUT1    DD DSNAME=CDHS.PNT.JOBS,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//SYSUT2    DD SYSOUT=A
//SYSIN     DD *
       PRINT   TYPORG=PO,MAXFLDS=1
       TITLE   ITEM=('EIS/PS INSTALLATION JOBS',1)
       TITLE   ITEM=(' ',1)
       RECORD  FIELD=(80,1,,25)
//PRINT3  EXEC PGM=IEBPTPCH,
//             REGION=60K,
//             TIME=(1,0)
//SYSPRINT  DD SYSOUT=A
//SYSUT1    DD DSNAME=CDHS.PNT.SOURCE,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//SYSUT2    DD SYSOUT=A
//SYSIN     DD *
       PRINT   TYPORG=PO,MAXFLDS=1
       TITLE   ITEM=('EIS/PS SOURCE CODE',1)
       TITLE   ITEM=(' ',1)
       RECORD  FIELD=(80,1,,25)
```

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE
(Please complete and return to NADB)

Agency: ____________________

Address: ____________________

____

HARDWARE

Location: ____________________

	IBM	UNIVAC	Other (Specify)
Model Number			
Series Number			
Core size (specify words or bytes)			
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			
Tape Drive (specify 7-track 556 bpi, 9-trach 1600 bpi, etc.)			
Disk Drive (specify 2314, 3330, etc.)			

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

(page 1 of 4)

Figure 8.3-d. System Status/Hardware/Software Questionnaire

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

TATUS

Data Handling Subsystem II (AQDHS-II):

led? Yes ________ No ________

y whom? ____________________

ask order expiration (date) ____________________

erational since (date) ____________________

lation in progress? Yes ________ No ________

y whom? ____________________

cheduled to be operational (date) ____________________

lation planned? Yes ________ No ________

nstallation schedule (dates) ____________________

pdate performed # ____________ Date ________

nventory Subsystem/	Area Source	Point Source
led?	Yes _____ No _____	Yes _____ No _____
y whom?	____________	____________
ask order expiration	(date)__________	(date)__________
perational since	(date)__________	(date)__________
lation in progress?	Yes _____ No _____	Yes _____ No _____
y whom?	____________	____________
cheduled to be operational	(date) __________	(date)__________
lation planned?	Yes _____ No _____	Yes _____ No _____
nstallation schedule	(date)__________	(date)__________
pdate performed	# ___ date ________	# ___ date ________

(page 2 of 4)

.3-d - continued. System Status/Hardware/Software Questionnaire

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE
(Please complete and return to NADB)

Agency:

Address:

HARDWARE

Location:

	IBM	UNIVAC	Other (Specify)
Model Number			
Series Number			
Core size (specify words or bytes)			
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			
Tape Drive (specify 7-track 556 bpi, 9-trach 1600 bpi, etc.)			
Disk Drive (specify 2314, 3330, etc.)			

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

(page 1 of 4)

Figure 8.3-d. System Status/Hardware/Software Questionnaire

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency and the name, title, address, and phone number of the agency's director.

Name and Title: ______________________________

Agency: ______________________________

Address: ______________________________

____

City: ______________ State: ________ Zip: ______

Phone Number(s): ______________________________

AQDHS-II DATA BASE COORDINATOR:

Name and Title: ______________________________

Address: ______________________________

____

City: ______________ State: ________ Zip: ______

Phone Number(s): ______________________________

EIS DATA BASE COORDINATOR: ____POINT SOURCE ____AREA SOURCE

Name and Title: ______________________________

Address: ______________________________

____

City: ______________ State: ________ Zip: ______

Phone Number(s): ______________________________

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Figure 8.3-d - continued. System Status/Hardware/Software Questionnaire

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: ______________________________

Address: ______________________________

____

City: ______________ State: __________ Zip: ______

Phone Number(s): ______________________________

AQDHS-II Contact (person responsible for performing updates):

Name and Title: ______________________________

Address: ______________________________

____

City: ______________ State: __________ Zip: ______

Phone Number(s): ______________________________

EIS Contact (person responsible for performing updates):

Name and Title: ______________________________

Address: ______________________________

____

City: ______________ State: __________ Zip: ______

Phone Number(s): ______________________________

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

____

____

____

(page 4 of 4)

Figure 8.3-d - continued. System Status/Hardware/Software Questionnaire

```
ICH70001I EPALMM   LAST ACCESS AT 17:40:59 ON 80.106
WACINIT: USER=EPALMM GRP=A087 A=A087 FM=36
$HASP373 STARTED - INIT  8 - CLASS F                                                  15 APR 80
IEF236I ALLOC. FOR EPALMMMM
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 233  ALLOCATED TO SYSUT1
IEF237I 37F  ALLOCATED TO DISK
IEF237I 47E  ALLOCATED TO TAPE
IEF237I JES2 ALLOCATED TO SYSIN
IEF237I 231  ALLOCATED TO SYS00001
IEF142I EPALMMMM - STEP WAS EXECUTED - COND CODE 0004
IEF285I   JES2.JOB03151.SO0102                            SYSOUT
IEF285I   SYS80106.T215211.RA000.EPALMMMM.R0000001        DELETED
IEF285I   VOL SER NOS= WORK58.
IEF285I   CN.EPALMM.A087.CONS.MU.PNT.SOURCE               KEPT
IEF285I   VOL SER NOS= CONSPK.
IEF285I   CN.EPALMM.A087.CONS.MU.PNT.SOURCE               PASSED
IEF285I   VOL SER NOS= USR462.
IEF285I   JES2.JOB03151.SI0101                            SYSIN
IEF285I   SYSCTLG.VSYSIM1                                 KEPT
IEF285I   VOL SER NOS= SYSIM1.
IEF373I STEP /        / START 80106.2152
IEF374I STEP /        / STOP  80106.2200 CPU    0MIN 05.63SEC SRB    0MIN 04.16SEC VIRT
ACC949I ****************** COMNET - SYSTEM G632 - STEP SUMMARY *****************
ACC949I *                                                                      *
ACC950I * JOB EPALMMMM,  STEP                 209.40 CUU               CC:  0004   *
ACC949I *                                                                      *
ACC950I *  START TUESDAY 04/15/80 AT 21:52:11         STOP 04/15/80 AT 22:00:02 *
ACC950I *      7:50.85 ELAPSED    0:05.63 TCB    0:04.16 SRB    0:09.79 TOT CPU *
ACC950I *  MEMORY:   9200K VIRTUAL ADDRESS SPACE,   252K  USED                 *
ACC950I *  EXCPS:        1658 DA,      6239 MT,       0 OTHER,      7897 TOTAL   *
ACC949I *                                                                      *
ACC950I *  EXCPS AT UNIT:     000:          0    233:       111    37F:      1547   *
ACC950I *   47E:      6239    000:          0    231:         0                *
ACC949I *                                                                      *
ACC950I *  PAGES IN:              0 VIO           62 SWAP          16 OTHER    *
ACC950I *  PAGES OUT:             0 VIO           69 SWAP           0 OTHER    *
ACC950I *                 162 PAGE SECONDS              124.63 RESIDENT SECONDS *
ACC949I *                                                                      *
ACC950I *  CUU COST FOR STEP            AT PRIORITY 1/1/1:                $23.45  *
ACC950I *   MOUNT CHARGES:        0 DISK,      0 TAPE:                    $0.00  *
ACC950I *  TOTAL COST FOR STEP            OF JOB EPALMMMM:                $23.45  *
ACC949I *                                                                      *
ACC949I ************************************************************************
IEF285I   CN.EPALMM.A087.CONS.MU.PNT.SOURCE                DELETED
IEF285I   VOL SER NOS= USR462.
IEF375I  JOB /EPALMMMM/ START 80106.2152
IEF376I  JOB /EPALMMMM/ STOP  80106.2200 CPU    0MIN 05.63SEC SRB    0MIN 04.16SEC
ACC949I ****************** COMNET - SYSTEM G632 - JOB SUMMARY ******************
ACC949I *                                                                      *
ACC951I * JOB EPALMMMM,    1 STEPS        209.40 TOTAL CUU           CC:  0004   *
ACC949I *                                                                      *
ACC951I *  SUBMIT TUESDAY 04/15/80 AT 16:34:49            5:17:22.08 ON QUEUE *
ACC951I *  START 04/15/80 AT 21:52:11                    STOP 04/15/80 AT 22:00:02 *
ACC951I *      7:50.97 ELAPSED    0:05.63 TCB    0:04.16 SRB    0:09.79 TOT CPU *
ACC949I *                                                                      *
ACC951I *  PRIORITY REQ/RCD/CHG:  1/1/1                                         *
ACC951I *  TOTAL CUU CHARGE FOR JOB EPALMMMM:                               $23.45  *
ACC951I *   MOUNT CHARGES:       0 DISK,      0 TAPE:                      $0.00  *
ACC951I *  TOTAL COST FOR JOB EPALMMMM, ACCOUNT A087:                      $23.45  *
ACC949I *                                                                      *
```

Figure 8.3-e. Condition Code for IEHMOVE

Table A-1. Valid UTM Zones and Components

State	State	Zones		Horizontal		Vertical	
Number	Name	Min	Max	Min	Max	Min	Max
01	Alabama	16	16	350	720.0	3342	3891
02	Alaska	01	59	0	999.9	5408	7629
03	Arizona	11	12	120	999.9	3450	4100
04	Arkansas	15	16	0	830.0	3640	4045
05	California	10	11	0	999.9	3595	4660
06	Colorado	12	13	90	999.9	4090	4550
07	Connecticut	18	19	20	825.0	4529	4661
08	Delaware	18	18	420	498.0	4254	4419
09	District of Columbia	18	18	280	310.0	4290	4330
10	Florida	16	17	0	999.9	2720	3450
11	Georgia	16	17	30	999.9	3353	3880
12	Hawaii	04	05	0	930.0	2144	2452
13	Idaho	11	12	0	999.9	4630	5430
14	Illinois	15	16	0	999.9	4089	4711
15	Indiana	16	16	380	730.0	4178	4628
16	Iowa	14	15	130	999.9	4486	4825
17	Kansas	14	15	0	930.0	4090	4440
18	Kentucky	16	17	0	999.9	4035	4342
19	Louisiana	15	16	0	999.9	3189	3645
20	Maine	19	19	275	770.0	4760	5265
21	Maryland	17	18	50	999.9	4200	4413
22	Massachusetts	18	19	40	999.9	4562	4738
23	Michigan	16	17	0	960.0	4617	5265
24	Minnesota	14	16	80	999.9	4815	5470

Table A-1 - continued. Valid UTM Zones and Components

State	State	Zones		Horizontal		Vertical	
Number	Name	Min	Max	Min	Max	Min	Max
25	Mississippi	15	16	30	995.0	3331	3880
26	Missouri	15	16	0	790.0	3980	4502
27	Montana	11	13	0	999.9	4920	5430
28	Nebraska	13	15	0	999.9	4420	4770
29	Nevada	11	11	200	898.0	3860	4660
30	New Hampshire	18	19	140	850.0	4717	5023
31	New Jersey	18	18	440	625.0	4309	4584
32	New Mexico	12	13	95	999.9	3473	4100
33	New York	17	18	30	999.9	4491	4990
34	North Carolina	16	18	0	999.9	3738	4066
35	North Dakota	13	14	0	999.9	5079	5430
36	Ohio	16	17	110	999.9	4244	4650
37	Oklahoma	13	15	0	999.9	3617	4110
38	Oregon	10	11	0	999.9	4640	5128
39	Pennsylvania	17	18	0	999.9	4397	4683
40	Puerto Rico	19	20	80	870.0	1969	2055
41	Rhode Island	19	19	230	290.0	4551	4656
42	South Carolina	17	17	260	750.0	3540	3902
43	South Dakota	13	14	0	999.9	4694	5085
44	Tennessee	15	17	0	999.9	3867	4067
45	Texas	13	15	0	999.9	2848	4045
46	Utah	12	12	198	795.0	4090	4660
47	Vermont	18	19	50	855.0	4727	4991

Table A-1 - continued. Valid UTM Zones and Components

State Number	State Name	Zones Min	Zones Max	Horizontal Min	Horizontal Max	Vertical Min	Vertical Max
48	Virginia	17	18	0	999.9	4041	4370
49	Washington	10	11	0	999.9	5035	5430
50	West Virginia	17	18	0	840.0	4117	4502
51	Wisconsin	15	16	0	999.9	4705	5211
52	Wyoming	12	13	0	999.9	4530	4990
53	American Samoa	no validation done					
54	Guam	no validation done					
55	Virgin Islands	20	20	290	350.0	1946	2056

Table A-2. Valid Control Equipment

Identification Number	Control Device/Method
000	No Equipment
001	Wet Scrubber - High Efficiency
002	Wet Scrubber - Medium Efficiency
003	Wet Scrubber - Low Efficiency
004	Gravity Collector - High Efficiency
005	Gravity Collector - Medium Efficiency
006	Gravity Collector - Low Efficiency
007	Centrifugal Collector - High Efficiency
008	Centrifugal Collector - Medium Efficiency
009	Centirfugal Collector - Low Efficiency
010	Electrostatic Precipitator - High Efficiency
011	Electrostatic Precipitator - Medium Efficiency
012	Electorstatic Precipitator - Low Efficiency
013	Gas Scrubber (general, not classified)
014	Mist Eliminator - High Velocity
015	Mist Eliminator - Medium Velocity
016	Fabric Filter - High Temperature
017	Fabric Filter - Medium Temperature
018	Fabric Filter - Low Temperature
019	Catalytic Afterburner
020	Catalytic Afterburner with Heat Exchanger
021	Direct Flame Afterburner
022	Direct Flame Afterburner with Heat Exchanger
023	Flaring
039	Catalytic Oxidation - Flue Gas Desulfurization
040	Alkalized Alumina

Table A-2. Valid Control Equipment - continued

Identification Number	Control Device/Method
041	Dry Limestone Injection
042	Wet Limestone Injection
043	Sulfuic Acid Plant - Contact Process
044	Sulfuric Acid Plant - Double Contact Process
045	Sulfur Plant
046	Process Change
047	Vapor Recovery System (including condensers, hooding, and other enclosures)
048	Activiated Carbon Absorption
049	Liquid Filtration System
050	Packed-Gas Absorption Column
051	Tray-Type Gas Absorption Column
052	Spray Tower
053	Venturi Scrubber
054	Process Enclosed
059	Metal Fabric Filter Screen (Cotton Gins)
060	Process Gas Recovery
061	Dust Suppression by Water Sprays
062	Dust Suppression by Chemical Stabilizers or Wetting Agents
063	Gravel Bed Filter
064	Annular Ring Filter
065	Catalytic Reduction
066	Molecular Sieve
071	Fluid Bed Dry Scrubber

APPENDIX B - EIS/PS File Specifications

INTRODUCTION

This appendix presents a cross-reference of the EIS/PS files and the programs that read or write them; it also discusses the blocking factors of these files.

The files used by EIS/PS can be catagorized as follows:

1) Permanent files such as the EIS/PS master file and the emission factor files. These are the essential files of EIS/PS.
2) NEDS report files. These are files placed on magnetic tape and submitted to EPA for inclusion in the NEDS data base.
3) Temporary Files. These files are passed between various EIS/PS programs and are not permanently retained.
4) Unit record files such as print files and input card files.
5) Library files (program source module library, program load module library, and procedure library). These files are maintained as partitioned data sets on IBM/OS systems.

CROSS-REFERENCE OF FILES AND PROGRAMS

Table B-1 is a cross-reference of EIS/PS files and programs that read or write them. This cross-reference is provided to assist the user in modifying a file's blocking factor or otherwise modifying the characteristics of a file.

CROSS-REFERENCE OF FILES AND PROGRAMS

Table B-1 is a cross-reference of EIS/PS files and programs that read or write them. This cross-reference is provided to assist the user in modifying a file's blocking factor or otherwise modifying the characteristics of a file.

---

programs; however, a comment line is provided for insertion of a RECORD CONTAINS clause. When changing the blocking factor for unit record files, this comment line should be replaced by the RECORD CONTAINS clause (to maintain the line number integrity of the source module).

2) Compile and link edit each COBOL program that is modified.

3) If the above actions are taken to change the blocking factor of a file prior to the creation of any copies of the file, no further action is necessary; the file will be created with the blocking factors that have been specified. However, if there are existing copies of the file, they must be reblocked before they can be used. IBM users can acccomplish the reblocking with the utility IEBGENER. An example of a run stream to reblock a disk file is shown in Figure B-1.

To change the blocking factor of the program source module library, the user must modify programs PRTLNGP (EP0140) and PSRLNGP (EP0160) as discussed in step 1 above, compile and link edit PRTLNGP (EP0140) and PSRLNGP (EP0160), and reblock the program source module library (see Figure B-2). IBM users should not reblock the program load module library or procedure library.

(Assistance in accomplishing these tasks may be obtain
systems personnel or NADB.)

Table B-1. Cross-Reference of Files and Programs

File	Programs which Process the File	Usage Input/Output
Permanent Files		
Emission Factor Description File	PEMEFAC (EP0040)	Input/Output
	PRPEFAC (EP0230)	Input
Emission Factor File	PEMEFAC (EP0040)	Input/Output
	PMSEFIN (EP0100)	Input
	PMSEFGN (EP0130)	Input
	PRPEFAC (EP0230)	Input
Master File	PFMMSTR (EP0120)	Input/Output
	PMSEFGN (EP0130)	Input
	PRPDUMP (EP0220)	Input
	PRPNETR (EP0200)	Input/Output
	PRPEPRJ (EP0250)	Input
	PRPMSTR (EP0210)	Input
	PRTGENR (EP0150)	Input
	PSRGENR (EP0170)	Input/Output
NEDS - Report Files		
NEDS Transaction File	PCENETR (EP0060)	Input
	PRPENTR (EP0200)	Output
	PSRNETR (EP0050)	Input/Output

(Page 1 of 2)

Table B-1 - continued

File	Programs which Process the File	Usage Input/Output
Temporary Files		
Answer File*	PRPEPRJ (EP0250)	Output
	PRTGENR (EP0150)	Output
	PSRGENR (EP0170)	Output
Sorted Emission Factor Transactions	PCVNEEF (EP0020)	Output
	PEMEFAC (EP0040)	Input
	PSREFTR (EP0030)	Input/Output
Internal Transactions	PCENETR (EP0060)	Output
	PEDMSTR (EP0080)	Output
	PFMMSTR (EP0120)	Input
	PMSEFIN (EP0100)	Output
	PMSEFGN (EP0130)	Output
	PRPENTR (EP0200)	Output
	PSRINTR (EP0110)	Input/Output
	PSREFIN (EP0090)	Input
Pre-insertion Transactions	PMSEFIN (EP0100)	Input
	PSREFIN (EP0090)	Output

(Page 2 of 3)

*An answer file may be used instead of the master file in any program that uses the master file as input.

Table B-1 - continued

File	Programs which Process the File	Usage Input/Output
Unit Record Files		
EIS/PS Transactions	PSRMFTR (EP0070)	Input
Emission Factor Transactions	PSREFTR (EP0030)	Input
Print Files	All Programs	Output
Option/Control Cards	PCENETR (EP0060)	Input
	PCVNEEF (EP0020)	Input
	PEDMSTR (EP0080)	Input
	PEMEFAC (EP0040)	Input
	PFMMSTR (EP0120)	Input
	PMSEFIN (EP0100)	Input
	PMSEFGN (EP0130)	Input/Output
	PRPENTR (EP0200)	Input
	PRPEPRJ (EP0250)	Input
	PRTLNGP (EP0140)	Input
	PSRLNGP (EP0160)	Input

(Page 3 of 3)

Table B-2. Blocking Factors of EIS/AS Files

File	Characters per record	Recommended Records per Block for Files on Disk		Recommended Records per Block for Files on Magnetic Tape	Records per Block used Locally
		IBM 3330 Disk (13,030 characters per track)*	IBM 2314 Disk (7,294 characters per track)		
Permanent Files					
Emission Factor Description File	150	21	24	26	
Emission Factor File	70	46	52	57	
Master File	172-1088	5	6	3	
NEDS - Report File					
NEDS Transaction File	80	NA	NA	50*	
Temporary Files					
Answer File	172-1088	5	6	3	
Emission Factor Transactions (sorted)	80	40	45	50	

*Blocking factors used by EIS/AS as released by NADB

(Page 1 of 2)

Table B-2 - continued. Blocking Factors of EIS/AS Files

File	Characters per record	Recommended Records per Block for Files on Disk		Recommended Records per Block for Files on Magnetic Tape	Records per Block used Locally
		IBM 3330 Disk (13,030 characters per track)*	IBM 2314 Disk (7,294 characters per track)		
Internal Transactions	120	27	30	33	
Pre-insertion Transactions	135	24	27	29	
Master File Transactions (sorted)	80	40	45	50	

---

*Blocking factors used by EIS/PS as released by NADB

(Page 2 of 2)

```
 1. // EXEC    PGM=IEBGENER
 2. //SYSPRINT DD SYSOUT=A
 3. //SYSUT1   DD DISP=OLD,
 4. //         DSNAME='file name'
 5. //SYSUT2   DD DISP=(NEW,CATLG,DELETE),
 6. //         DSNAME='file name',
 7. //         SPACE=(TRK,(10,1),RLSE),
 8. //         UNIT=DISK,
 9. //         VOL=('volume/serial information'),
10. //         DCB=('DCB information')
11. //SYSIN    DD DUMMY
```

User-supplied JCL:

Line 4. Replace 'file name' with the name of the file to be reblocked.

Line 6. Replace 'file name' with the name of the reblocked file.

Line 7. Space allocation is dependent upon the file size, and it may be necessary to increase the space allocation.

Line 9. Replace 'volume/serial information' with the volume and serial specifications of the reblocked file.

Line 10. Replace 'DCB information' with the DCB information specifying the new blocking factor.

Figure B-1. Sample Job Stream to Reblock a Permanent EIS/PS File Stored on Disk.

```
1.  // EXEC    PGM=IEBCOPY
2.  //SYSPRINT DD SYSOUT=A
3.  //SYSUT1   DD DISP=OLD,
4.  //         DSNAME='library name'
5.  //SYSUT2   DD DISP=(NEW,CATLG,DELETE),
6.  //         DSNAME='library name',
7.  //         SPACE=(TRK,(10,1),RLSE),
8.  //         UNIT=DISK,
9.  //         VOL=('volume/serial information'),
10. //         DCB=('DCB information')
11. //SYSIN    DD *
12.   COPY     OUTDD-SYSUT2,INDD=SYSUT1
13. /*
```

User-supplied JCL

Line 4. Replace 'library name' with the name of the program source module library to be reblocked.

Line 6. Replace 'library name' with the name of the reblocked library.

Line 7. Space allocation is dependent upon the file size, and it may be necessary to increase the space allocation.

Line 9. Replace 'volume/serial information' with the volume and serial specifications of the reblocked library.

Line 10. Replace 'DCB information' with the DCB information specifying the new blocking factor.

Figure B-2. Sample Job Stream to Reblock an EIS/PS Program Source Module Library

This appendix provides sample load sheets which can be reproduced by the user to aid in the generation of transactions for the emission factor files and the master file. A sample load sheet is also provided for retrieval language specifications.

AGENCY ____________

EMISSIONS INVENTORY SYSTEM / POINT SOURCE (EIS / PS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
PLANT RECORD (SEGMENT O) TRANSACTIONS

BY ____________
DATE ____________
PAGE ______ OF ______

STATE	COUNTY	AQCR	PLANT ID NUMBER	DATE OF RECORD YR	DATE OF RECORD DAY
1	3	7	10	14	18

CON-TROL REGION	LOCAL CON-TROL	USER PLANT ID	CITY	UTM ZONE	OWNER	CONTACT PERSON	TELEPHONE	PRINCIPAL PRODUCT	CARD NBR	ACTION
19	22	24	36	40	42	43	58	68	78	80
									0 1	

ESTABLISHMENT NAME AND ADDRESS	NUMBER OF EMPLOYEES	PROPERTY AREA		CARD NBR	ACTION
19	67	71		78	80
				0 2	

ESTABLISHMENT MAILING ADDRESS		CARD NBR	ACTION
19 66		78	80
		0 3	

NEDS P7 PLANT COMMENT		CARD NBR	ACTION
19 70		78	80
		0 4	

AGENCY ____________________

EMISSIONS INVENTORY SYSTEM/POINT SOURCE (EIS/PS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
POINT RECORD (SEGMENT 1) TRANSACTIONS

BY ____________________

DATE ____________________

PAGE __________ OF __________

STATE	COUNTY	AQCR	PLANT ID NBR	DATE OF RECORD YR	DATE OF RECORD DAY	NEDS POINT ID
1	3	7	10	14		19

USER POINT ID	SIC	IPP	UTM HORIZ	UTM VERT	LATITUDE DEG	LATITUDE MIN	LATITUDE SEC	LONGITUDE DEG	LONGITUDE MIN	LONGITUDE SEC	ANNUAL THRUPUT DEC FEB	ANNUAL THRUPUT MAR MAY	ANNUAL THRUPUT JUN AUG	ANNUAL THRUPUT SEP NOV	OPERATE RATE HR	OPERATE RATE D	OPERATE RATE WK	BOILER CAPACITY	SPACE HEAT		CARD NUM	ACTION
21	24	28	30	34	39			45			52				60			65	70		78	80
																					1 1	

STACK DATA HEIGHT	STACK DATA DIAM	STACK DATA TEMP	STACK DATA FLOWRATE	STACK DATA VELOCITY	STACK DATA PLUME HEIGHT	POINTS WITH COMMON STACK		COMP	COMP SCHED YR	COMP SCHED MO	COMPLIANCE UPDATE YR	COMPLIANCE UPDATE MO	COMPLIANCE UPDATE DAY	ECAP	CONTROL REGULATIONS REG 1	CONTROL REGULATIONS REG 2	CONTROL REGULATIONS REG 3		CARD NUM	ACTION
21	25	28	32	39	44	48		52	53		57			63	64		75		78	80
																			[illegible]	

POLLUTANT ID	CONTROL EQUIPMENT COST	PRIM CNTRL EQUIP	SECNDY CNTRL EQUIP	EST CONTROL EFF	EMISSIONS ESTIMATE	MEASURED EMISSIONS	ALLOWABLE EMISSIONS	E UNT	ESTM	TESTM		CARD NUM	ACTION
21	26	33	36	29	42	49	56	63	64	65		78	80
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	
												[illegible]	

NEDS P7 POINT COMMENT		CARD NUM	ACTION
21 72			80
		[illegible]	

AGENCY ____________

EMISSIONS INVENTORY SYSTEM/POINT SOURCE (EIS/PS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
SCC RECORD (SEGMENT 2) TRANSACTIONS

BY ____________
DATE ____________
PAGE ________ OF ______

STATE	COUNTY	AQCR	PLANT ID NBR	DATE OF RECORD		NEDS POINT ID	SCC				SCC SEQ NBR
				YR	DAY		I	II	III	IV	
1	3	7	10	4		19	21				29

BEC		F UNIT	FUEL PROCESS SOLID WASTE OPERATING RATE	MAXIMUM DESIGN RATE	SULFUR CONTENT	ASH CONTENT	HEAT CONTENT	A/S ORG	A/S SRC		CARD NBR	ACTION
NO.	ID											
31		36	37	44	51	54	57	62	63		78	80
				▲	▲	▲					2 1	

CONF	SHC CD	SOURCE DESCRIPTION		CARD NBR	ACTION
31	32	33 57		78	80
				2 2	

EMF ORG	EMF SRC	POLLUTANT ID	EMISSION FACTOR	A/S CD	E UNT	POLLUTANT ID	EMISSION FACTOR	A/S CD	E UNT		CARD NBR	ACTION
31	32	33	38	47	48	49	54	63	64		78	80
			▲				▲				2 3	
			▲				▲				2 3	
			▲				▲				2 3	
			▲				▲				2 3	
			▲				▲				2 3	
			▲				▲				2 3	
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			▲				▲				2 3	
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			▲				▲				2 3	
			▲				▲				2 3	
			▲				▲				2 3	
			▲				▲				2 3	
			▲				▲				2 3	
			▲				▲				2 3	
			▲				▲				2 3	

NEDS P7 SCC COMMENT - LEFT HALF		CARD NBR	ACTION
31 56		78	80
		2 4	

NEDS P7 SCC COMMENT - RIGHT HALF 789		CARD NBR	ACTION
31 56		78	80
		2 5	

AGENCY ____________

EMISSIONS INVENTORY SYSTEM / POINT SOURCE (EIS / PS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
COMMENT RECORD (SEGMENT 3) TRANSACTIONS

BY ____________

DATE ____________

PAGE ______ OF ______

STATE	COUNTY	AQCR	PLANT ID NBR	DATE OF RECORD		POINT ID
				YR	DAY	
1	3	7	10	14		19

PNR SEQ NBR	LINE NBR	L/R	HALF COMMENT	CARD NBR	ACTION
21	23	26	27	78	80
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	
				3 0	

AGENCY ____________

EMISSIONS INVENTORY SYSTEM/POINT SOURCE (EIS/PS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
EMISSION FACTOR FILE TRANSACTIONS

BY ____________

DATE ____________

PAGE ______ OF ______

SCC NUMBER	DATE OF RECORD YR	DATE OF RECORD DAY
3 — 10	18	22

NBR	ACTION	NEDS CATEGORY 1	NEDS CATEGORY 2	NEDS CATEGORY 3
1	2	23	40	57 — 73
1				

NBR	ACTION	NEDS CATEGORY 4	NEDS UNITS 1 - 35
1	2	23	40 — 74
2			

NBR	ACTION	NEDS UNITS 36 - 69
1	2	23 — 56
3		

NBR	ACTION		ORG	SRC	POLLUTANT ID	POLLUTANT NAME	FLAGS V	FLAGS A	FLAGS S	UNIT	MEAS	EMISSION FACTOR	ASH CNT	SUL CNT	CDEF	CONF
1	2		11	12	13 — 17	23 — 42	43	45	46	47		49	58	61	64	67
4					0 0 0 0 0											
4																
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BY ____________

DATE ____________

PAGE ______ OF ______

EMISSIONS INVENTORY SYSTEM / POINT SOURCE (EIS / PS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
RETRIEVAL SPECIFICATIONS

AGENCY ____________

SEE BACK OF FORM FOR VALID CODES

1 8
$SSELECT

USER KEYWORD
10 13

COPY MEMBER NAME
16 23

SUBJECT NAME
1 31

N F
33

R O
35

OBJECT NAME (LITERALS MUST BE ENCLOSED IN SINGLE QUOTES)
37 67

B O
69 71

1 5
$SEND

EMISSIONS INVENTORY SYSTEM / POINT SOURCE (EIS/PS)
RETRIEVAL SPECIFICATIONS

PAGE 2

VALID VALUES FOR

NEGATION FLAG (NF):
BLANK, N

RELATIONAL OPERATOR (RO):
= EQUAL
> GREATER THAN
< LESS THAN

BOOLEAN OPERATOR (BO):
AND, OR, BLANK

TYPE: N = NUMERIC
A = ALPHABETIC

PLANT RECORD DATA NAMES		
NAME	LENGTH	TYPE
AQCR	3	N
CITY	4	N
CONTACT	15	A
COUNTY	4	N
DATE-OF-0-RECORD	5	N
LOCAL-CONTROL	2	A
NUMBER-OF-EMPLOYEES	4	N
OWNER	1	A
PLANT-ID	4	A
PRINCIPAL-PRODUCT	10	A
PROPERTY-AREA	6(1)	N
RECORD-0-DAY	3	N
RECORD-0-YEAR	2	N
SEG-0-ID	1	N
STATE	2	N
TELEPHONE	10	N
USER-CONTROL-REGION	3	A
USER-PLANT-ID	12	A
UTM-ZONE	2	N

COMMENT RECORD DATA NAMES		
NAME	LENGTH	TYPE
DATE-OF-3-RECORD	5	N
LINE-NBR	3	N
PNR-SEQ-NBR	2	N
RECORD-3-DAY	3	N
RECORD-3-YEAR	2	N
SEG-3-ID	1	N
SEG-3-POINT-ID	2	A

POINT RECORD DATA NAMES		
NAME	LENGTH	TYPE
ANNUAL-THRUPUT	8	N
BOILER-DESIGN-CAPACITY	5	N
COMPLIANCE-SCHEDULE	4	N
COMPLIANCE-STATUS	1	N
COMPLIANCE-STATUS-UPDATE	6	N
CONTROL-REGULATIONS	12	N
DATE-OF-1-RECORD	5	N
DAY-WEEK	1	N
DEC-FEB	2	N
DIAMETER	3(1)	N
ECAP	1	N
FLOW-RATE	7	N
HEIGHT	4	N
HORIZONTAL	4(1)	N
HOURS-DAY	2	N
IPP	2	N
JUN-AUG	2	N
LATITUDE	6	N
LATITUDE-DEGREE	2	N
LATITUDE-MINUTE	2	N
LATITUDE-SECOND	2	N
LONGITUDE	7	N
LONGITUDE-DEGREE	3	N
LONGITUDE-MINUTE	2	N
LONGITUDE-SECOND	2	N
MAR-MAY	2	N
NBR-OF-POLLUTANTS	2	N
NEDS-POINT-ID	2	A
NORMAL-OPERATING	5	N
PLUME	4	N
POINTS-PER-STACK	4	N
RECORD-1-DAY	3	N
RECORD-1-YEAR	2	N
REG-1	4	N
REG-2	4	N
REG-3	4	N
SCHEDULE-MONTH	2	N
SCHEDULE-YEAR	2	N
SEG-1-ID	1	N
SEP-NOV	2	N
SIC	4	N
SPACE-HEAT	3(1)	N
STATUS-DAY	2	N
STATUS-MONTH	2	N
STATUS-YEAR	2	N
TEMPERATURE	4	N
USER-POINT-ID	3	A
UTM-COORDINATES	9	N
VELOCITY	5	N
VERTICAL	5(1)	N
WEEK-YEAR	2	N

POINT REPEATING DATA NAMES		
NAME	LENGTH	TYPE
ALLOWABLE	7	N
CNTL-EQUIP-COST	7(2)	N
CONTROL-EQUIPMENT	6	N
EMISSION-UNITS	1	N
EST-CONTROL-EFF	3(1)	N
ESTIMATES	7	N
ESTIMATION-METHOD	1	N
MEASURED	7	N
POLLUTANT-ID	5	N
POTENTIAL	7	N
PRIMARY-CNTL	3	N
SECONDARY-CNTL	3	N
TEST-METHOD	1	N

SCC RECORD DATA NAMES		
NAME	LENGTH	TYPE
ASH-CONTENT	3(1)	N
BEC	5	N
BEC-ID	2	N
BEC-NUMBER	3	N
CONFIDENTIALITY	1	N
DATE-OF-2-RECORD	5	N
EMISSION-FACTOR-SOURCE	1	A
FUEL-PROCESS-RATE	7	N
FUEL-UNITS	1	N
HEAT-CONTENT	5	N
MAX-DESIGN-RATE	7(3)	N
NUMBER-OF-EF	2	N
RECORD-2-DAY	3	N
RECORD-2-YEAR	2	N
SCC	8	N
SCC-I	1	N
SCC-II	2	N
SCC-III	3	N
SCC-IV	2	N
SCC-SEQ-NBR	2	N
SEG-2-ID	1	N
SEG-2-POINT-ID	2	A
SOURCE-CODE	1	A
SOURCE-DESCRIPTION	25	A
SULFUR-CONTENT	3(2)	N

NUMBERS IN PARENTHESES INDICATE
ASSUMED DECIMAL POSITIONS

EIS/PS QUICK LOOK RETRIEVAL

NAME

DATE

		REPORT TITLE
1 8		10 72
$ $ S E L E C T		

SELECTION CRITERIA

	(	DATA ABBR	REL OP	VALUE	)	AND/OR
1 2	4	6 9	11	13 24	26	28 30
1 0						
1 0						
1 0						
1 0						
1 0						
1 0						
1 0						
1 0						
1 0						
1 0						

	(	DATA ABBR	REL OP	VALUE	)	AND/OR
1 2	4	6 9	11	13 24	26	28 30
1 0						
1 0						
1 0						
1 0						
1 0						
1 0						
1 0						
1 0						
1 0						
1 0						

RELATIONAL OPERATORS:

E – EQUAL
U – UNEQUAL
G – GREATER THAN
L – LESS THAN
P – PRESENT
B – BLANK

AND/OR MUST BE BLANK ON LAST 10 CARD

OUTPUTS

	RPT CODE	RPT CODE
1 2	4 5	7 8
2 0		

REPORT CODES:

QL – QUICK LOOK REPORT

TA – TURNAROUND DOCUMENT

AF – ANSWER FILE

REPORT ORDER

	DATA ABBR	X	DATA ABBR	X	DATA ABBR	X	DATA ABBR	X	DATA ABBR	X	DATA ABBR	X
1 2	4 7	8	10 13	14	16 19	20	22 25	26	28 31	32	34 37	38
3 0												

ENTER DATA ABBREVIATIONS LEFT TO RIGHT

ENTER X FOR PAGE BREAK/SUBTOTALLING

QUICK LOOK REPORTS

	SUP-PRES	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT
1 2	4	6 9	10	12 15	16	18 21	22	24 27	28	30 33	34	36 39	40	42 45	46	48 51	52	54 57	58	60 63	64
4 0																					
4 1																					
4 2																					

ENTER X FOR SUPPRESSION OF DETAIL LINES AND FOR TOTALS

1 5
$ $ E N D

EIS/PS QUICK LOOK RETRIEVAL

DATA ELEMENT	ABBRE-VIATION	POSITION IN MASTER FILE	DATA ELEMENT LENGTH IN MASTER FILE	DATA ELEMENT LENGTH IN QUICK LOOK REPORT	DATA ELEMENT LENGTH ** IN QUICK LOOK REPORT IF TOTALLED
DATA ELEMENTS COMMON TO ALL SEGMENTS					
AQCR	AQCR	50	3	5	
County	CNTY	46	4	5	
Plant	PLNT	53	4	5	
Segment Date	DATE	57	5	6	
Segment Day	DAYY	59	3	5	
Segment ID	SEGM	57	2	5	
Segment Year	YEAR	62	1	5	
State	STTE	44	2	5	
DATA ELEMENTS COMMON TO POINT, SCC, and COMMENT SEGMENTS					
NEDS Point ID	NPID	63	2	5	
PLANT SEGMENT DATA ELEMENTS					
AQCR	0AQC	50	3	5	
City	CITY	82	4	5	
Contact	CONT	89	15	16	
County	0CNT	46	4	5	
Local Control	LCON	68	2	5	
Mailing Address	MAIL	182	48	49	
Name and Address	NAAD	124	48	49	
No. of Employees	NUME	172	4	5	9
Ownership	OWNS	88	1	5	
Plant ID	0PLN	53	4	5	
Principal Product	PROD	114	10	11	
Property Area	PROP	176	6	8	13
Segment Date	0DTE	57	5	6	
Segment Day	0DAY	59	3	5	
Segment ID	0SEG	62	1	5	
Segment Year	0YER	57	2	5	
State	0STT	44	2	5	
Telephone	TELE	104	10	11	
User Control Region	UCON	65	3	5	
User Plant ID	UPLT	70	12	13	
UTM Zone	UTMZ	86	2	5	
POINT SEGMENT DATA ELEMENTS					
AQCR	1AQC	50	3	5	
Boiler Design Capacity	BOIL	109	5	11	11
Control Regulations	CREG	160	12	13	
Control Regulation 1	REG1	160	4	5	
Control Regulation 2	REG2	164	4	5	
Control Regulation 3	REG3	168	4	5	
Compliance Schedule	CSCH	149	4	5	
Comp. Schedule Year	SCHY	149	2	5	
Comp. Schedule Month	SCHM	151	2	5	
Compliance Status	CSTT	148	1	5	
Compliance Update	CUPD	153	6	7	
Comp. Update Day	CUDY	157	2	5	
Comp. Update Month	CUMN	155	2	5	
Comp. Update Year	CUYR	153	2	5	
County	1CNT	46	4	5	
ECAP	ECAP	159	1	5	
Exhaust Flow Rate	FLOW	128	7	8	
IPP Code	IPPC	72	2	5	
Latitude	LATT	83	6	7	
Latitude Degree	LATD	83	2	5	
Latitude Minute	LATM	85	2	5	
Latitude Second	LATS	87	2	5	
Longitude	LONG	89	7	8	
Longitude Degree	LOND	89	3	5	
Longitude Minute	LONM	92	2	5	
Longitude Second	LONS	94	2	5	
NEDS Point ID/SEGMENT	S1ID	63	2	5	
Normal Operating Rate	NORM	104	5	6	
Number of Pollutants	NUMP	239	2	5	
Plant ID	1PLN	53	4	5	
Plume Height	PLUM	140	4	5	
Point IDs	PTID	63	5	6	
Points w/ Common Stack	PWCS	144	4	5	
Segment Date	1DTE	57	5	6	
Segment Day	1DAY	59	3	5	
Segment ID	1SEG	62	1	5	
Segment Year	1YER	57	2	5	
SIC Code	SICC	68	4	5	
Space Heat %	SPAC	114	3	5	
Stack Data	STAD	117	27	28	
Stack Diameter	DIAM	121	3	5	
Stack Height	HGHT	117	4	5	
Stack Temperature	TEMP	124	[illegible]	5	
POINT SEGMENT DATA ELEMENTS (continued)					
State	1STT	44	2	5	
Throughput	THRU	96	8	9	
Throughput/Dec-Feb	WNTR	96	2	5	
Throughput/Jun-Aug	SUMM	100	2	5	
Throughput/Mar-May	SPNG	98	2	5	
Throughput/Sep-Nov	FALL	102	2	5	
User Point ID	UPID	65	3	5	
UTM Coordinates	UTMC	74	9	10	
UTM Horizontal	HORZ	74	4	6	
UTM Vertical	VERT	78	5	7	
Velocity	VELO	135	5	6	
Repeating Point Segment Data Elements (POLL must be specified)					
Control Equipment	CEQP	253	6	7	
Control Equip. Cost	CCST	246	7	9	14
Emission Units	EUNT	290	1	5	
Emissions Allowable	ALLO	276	7	8	13
Emissions Estimate	ESTI	262	7	8	13
Emissions Measured	MEAS	269	7	8	13
Est Control Efficiency	ECEF	259	3	5	
Estimation Method	ESTM	291	1	5	
Pollutant ID	POLL*	241	5	6	
Primary Control Equip	PCTL	253	3	5	
Secondary Control Equip	SCTL	256	3	5	
Test Method	TSTM	292	1	5	
SCC SEGMENT DATA ELEMENTS					
AQCR	2AQC	50	3	5	
Ash Content	ASHC	98	3	5	
BEC Code	BECC	75	5	6	
BEC ID	BECI	78	2	5	
BEC Number	BECN	75	3	5	
Confidentiality	CONF	106	1	5	
County	2CNT	46	4	5	
Emission Factor Source	EMFS	133	1	5	
Fuel Process Rate	FPRT	81	7	8	13
Fuel Units	FUNT	80	1	5	
Heat Content	HEAT	101	5	6	
Maximum Design Rate	MDRT	88	7	9	14
NEDS Point ID/Segment 2	S2ID	63	2	5	
No. of Emission Factors	NEMF	197	2	5	
Plant ID	2PLN	53	4	5	
Source Class. Code	SCCC	65	8	9	
SCC 1	SCC1	65	1	5	
SCC 2	SCC2	66	2	5	
SCC 3	SCC3	68	3	5	
SCC 4	SCC4	71	2	5	
SCC Sequence Number	SSQN	73	2	5	
Segment Date	2DTE	57	5	6	
Segment Day	2DAY	59	3	5	
Segment ID	2SEG	62	1	5	
Segment Year	2YER	57	2	5	
Source Code	SRCC	107	1	5	
Source Description	SRCD	108	25	26	
State	2STT	44	2	5	
Sulfur Content	SULC	95	3	5	
REPEATING SCC SEGMENT DATA ELEMENTS (MPID must be specified)					
Ash/Sulfur Code	ASSC	214	1	5	
Emission Factor	EMFA	204	9	11	
Emission Factor Units	EMFU	215	1	5	
Pollutant ID	MPID*	199	5	6	
COMMENT SEGMENT DATA ELEMENTS					
AQCR	3AQC	50	3	5	
Comments	COMM	71	102	99	
County	3CNT	46	4	5	
Left Comment	LCMT	71	51	52	
Line Number	LINE	67	3	5	
NEDS Point ID/Segment 3	S3ID	63	2	5	
Plant ID	3PLN	53	4	5	
PNR Sequence Number	SEQN	65	2	5	
Right Comment	RCMT	122	51	52	
Segment Date	3DTE	57	5	6	
Segment Day	3DAY	59	3	5	
Segment ID	3SEG	62	1	5	
Segment Year	3YER	57	2	5	

* Relational Operator Must Be E

** Only fields having an entry in this column are eligible for totalling.

0 denotes zero